1019046

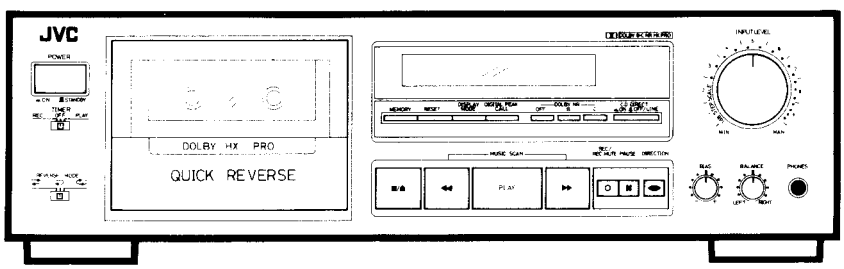
JVC

1056

SERVICE MANUAL

STEREO CASSETE DECK

TD-R441TN
TD-R442BK A/B/C/E/G/J/U



Area Suffix

A . . . . . Australia
B . . . . . U.K.
C . . . . . Canada
E . . . Continental Europe
G . . . . . Germany
J . . . . . U.S.A.
U . . . . . Other Areas

FEATURES

1. **Full logic control mechanism**
2. **Silent quick-reverse mechanism**
3. **Electrically driven cassette holder**
4. **Dolby* HX PRO headroom extension**
5. **Dolby B/C noise reduction system**
6. **Centralized display**
   - 2-color fluorescent peak level indicator
   - 4 digit linear counter/digital peak level and level meter display
7. **Auto tape select mechanism**
8. **Adjustable bias**
9. **Timer start mechanism**
10. **DDRP (Dynamics Detection Recording Processor)**
    With the DDRP function, the recording level is adjusted automatically so that recording is performed in optimum condition.
11. **COMPU LINK-1/SYNCHRO terminal**
12. **Other features**
    - 2 pairs of line input jacks including CD direct input
    - High bias frequency of 170 kHz for improved recording
    - Music Scan
      "Under license from Staar S.A., Brussels Belgium"

* Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.
"Dolby", the double-D symbol ⧈ and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

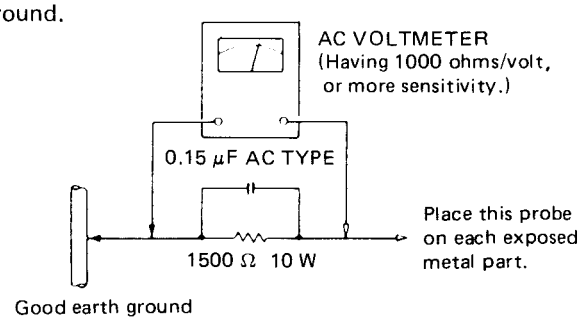
- TD-R441TN and TD-R442BK are the same in the specifications except the coloring, namely, TD-R441TN is Titanium color while TD-R442BK is Black color.
- The essential mechanism of the both versions is the same as that of TD-W505.

Contents

No. 4330
June 1991

■ Safety Precautions

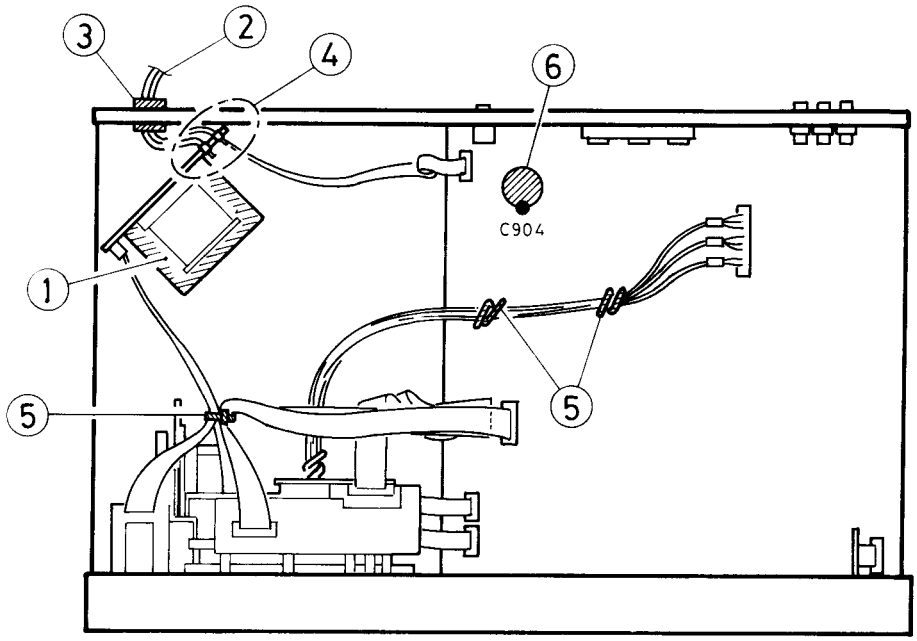
1. The design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by (⚠) on the Schematic Diagram and Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage current check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna termianls, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500 Ω 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).

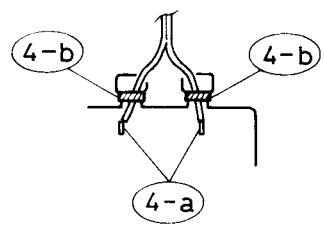


Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

■ Safety Precautions about TD-R441/-R442





1. Securely fix the power transformer while confirming its marking specified in the following.
   J version : 5216507 (UL approved No.)
   C version : VTP52A5-011F
2. Confirm the marking of the power cord and the plug.
   Power cord : SPT-1
   Power cord plug : KP-10 or SU-1
3. Install the cord bushing by the specified tool while confirming the marking.
   Bushing : NIFCO 2271
4. a) When installing the power cord, wind it around the terminal by the end before soldering.
   b) Arrange the wires while binding them nearby the terminal.
5. When arranging every wire and cable, avoid the active power parts, mobiles, heat generating parts, sharp-edged parts, etc.
6. For C904, make sure to use the specified part of the following rating.
   C904 : 2200 µF/25 V

■ Instructions (Extract)

SPECIFICATIONS

(A/C/J/U-Version)

Type	: Stereo cassette deck
Track system	: 4-track, 2-channel
Tape speed	: 4.8 cm/sec. (1-7/8 inch/sec.)
Frequency response	: (-20 dB recording) Type IV tape; 20 - 17,000 Hz 30 - 16,000 Hz (± 3 dB) Type II tape; 20 - 16,000 Hz 30 - 15,000 Hz (± 3 dB) Type I tape; 20 - 16,000 Hz 30 - 15,000 Hz (± 3 dB)
S/N ratio	: 58 dB (S = 315 Hz, k3 = 3 %, N = A-weighted, "Type IV" tape) The S/N is improved by about 15 dB at 500 Hz and by max. 20 dB at 1 kHz ~ 10 kHz with Dolby C NR on and improved by 5 dB at 1 kHz and by 10 dB at above 5 kHz with DOLBY B NR on.
Improvement of MOL	: 4 dB at 10 kHz with Dolby C NR on.
Wow and flutter	: 0.08 % (WRMS)
Channel separation	: 40 dB (1 kHz)
Crosstalk	: 60 dB (1 kHz)
Harmonic distortion	: k3; 0.8% (Type IV tape, 315 Hz, 0 VU)
Heads	: METAPERM head for recording/playback, 2-gap ferrite head for erasure; Combination head × 1
Motors	: Electronic governed DC motor for capstan × 1 DC motor for reel × 1, DC motor for mechanism × 1 DC motor for cassette holder × 1
Fast forward/Rewind time	: Approx. 100 sec. with C-60 cassette
Input terminals	
CD DIRECT (× 1 circuit)	: Input sensitivity; 80 mV (0 VU) Input impedance; 50 kΩ
LINE IN (× 1 circuit)	: Input sensitivity; 80 mV (0 VU) Input impedance; 50 kΩ
Output terminals	
LINE OUT (× 1 circuit)	: Output level; 300 mV (0VU) Output impedance; 5 kΩ
PHONES × 1	: Output level; 0.3 mW/8 Ω (0 VU) Matching impedance 8 Ω – 1 kΩ
Other terminals	: COMPU LINK-1/ SYNCHRO × 2
Power requirement	
A version	: AC 240 V, 50/60 Hz
C/J version	: AC 120V, 60 Hz
U version	: AC 230/127/110V, 50/60 Hz
Power consumption	: With power switch on 18 W With power switch stand by 1.6 W

TECHNISCHE DATEN

(G-Version)

Typ	: Stereo-Cassettendack
Spursystem	: 4-Spur, 2-Kanal
Bandgeschwindigkeit	: 4,8 cm/Sek.
Frequenzgang	: (–20 dB-Aufnahme) Type IV band; 20 – 17.000 Hz (DIN) 30 – 16.000 Hz (±3 dB) Type II band; 20 – 16.000 Hz (DIN) 30 – 15.000 Hz (±3 dB) Type I band; 20 – 16.000 Hz (DIN) 30 – 15.000 Hz (±3 dB)
Signal-Rauschabstand	:58 dB (S=315 Hz, k3=3%, N=A-gewichtige, Type IV band) Der Signal-Rauschabstand ist um 15 dB bei 500 Hz und um max. 20 dB bei 1 kHz ~ 10 kHz mit eingeschaltetem Dolby C NR verbessert und um 5 dB bei 1 kHz und um 10 dB über 5 kHz mit eingeschalteter Dolby B NR.
Verbesserung des Höchstausgangspegels	: 4 dB bei 10 kHz mit eingeschaltetem DOLBY C NR.
Gleichlaufschwankungen	: ±0,2% (DIN/IEC)
Kanaltrennung	: 40 dB (1 kHz)
Übersprechdämpfung	: 60 dB (1 kHz)
Klirrfaktor	: K3; 0,8% (Type IV band, 315 Hz, 0 VU)
Köpfe	: METAPERM-Kopf für Aufnahme/Wiedergabe, 2-splat Ferrit-Kopf für löschen; Kombinationskopf × 1
Motoren	: Elektronisch gesteuerter Gleichstrommotor für Capstan × 1, Spulen-Gleichstrommotor × 1 Gleichstrommotor für Lautwerk × 1 Gleichstrommotor für Cassettenhalterung × 1
Schnellvorlaufzeit/ Rückspulzeit	: Ca. 100 Sekunden (C-60 Cassette)
Eingänge	
CD DIRECT (×1 Schaltung)	: Eingangspegel; 80 mV (0 VU) Eingangsimpedanz; 50 kΩ
LINE IN (×1 Schaltung)	: Eingangspegel; 80 mV (0 VU) Eingangsimpedanz; 50 kΩ
Ausgange	
LINE OUT (× 1 Schaltung)	: Ausgangspegel; 300 mV (0 VU) Ausgangsimpedanz; 5 kΩ
PHONES × 1	: Ausgangspegel; 0,3 mW/8 Ω (0 VU) Geeignete Impedanz; 8 Ω - 1 kΩ
Weitere Anschlüsse	: COMPU LINK-1 /SYNCHRO × 2
Spannungsversorgung	: Netz 230 V 50/60 Hz
Leistungsaufnahme	: 18 W bei Betrieb 1,6 W bei Betriebsbereitschaft

CARACTERISTIQUES TECHNIQUES (Version E)

Type	: Platine d'enregistrement stéréo
Systéme de pistes	: 4 pistes, 2 canaux
Vitesse de défilement	: 4,8 cm/sec.
Réponse en fréquence	: (Enregistrement à - 20 dB) Bande "Type IV"; 20 à 17.000 Hz (DIN) 30 à 16.000 Hz (± 3 dB) Bande "Type II"; 20 à 16.000 Hz (DIN) 30 à 15.000 Hz (±3 dB) Bande "Type I"; 20 à 16.000 Hz (DIN) 30 à 15.000 Hz (±3 dB)
Rapport signal/Bruit	: 58 dB (S=315 Hz, K3 = 3%, N=A-ponderé, Bande "Type IV") Le rapport S/B est amélioré de 15 dB environ á 500 Hz et de 20 dB maximum à 1 kHz-10 kHz avec le Dolby C NR en circuit, et amélioré de 5 dB à 1 kHz et 10 dB environ à 5 kHz avec le Dolby B NR en circuit.
Amélioration du niveau de sortie max	: 4 dB à 10 kHz avec le Dolby C NR en circuit.
Pleurage et scientillement	: ±0,2 % (DIN/IEC)
Séparation des canaux	: 40 dB (1 kHz)
Diaphonie	: 60 dB (1 kHz)
Distorsion harmonique	: K3; 0,8 % (bande "Type IV", 315 Hz, 0 VU)
Têtes	: Tête METAPERM pour enregistrement/lecture, tête de ferrite à double-entrefer pour l'effacement; tête combinée × 1
Moteurs	: Moteur CC à asservissement électronique pour le cabestan × 1, Moteur CC pour bobine × 1, Moteur CC pour méchanique × 1 Moteur CC pour porte-cassette × 1
Temps d'avance rapide/réembobinage	: Environ 100 secondes, avec une cassette C-60
Bornes d'entrée	
CD DIRECT (× 1 circuit)	: Sensibilite d'entrée; 80 mV (0 VU) Impédance d'entrée; 50 kΩ
LINE IN (× 1 circuit)	: Sensibilite d'entrée; 80 mV (0 VU) Impédance d'entrée; 50 kΩ
Borne de sortie	
LINE OUT (× 1 circuit)	: Niveau de sortie; 300 mV (0 VU) Impédance de sortie; 5 kΩ
PHONES × 1	Niveau de sortie; 0,3 mW/8 Ω (0 VU) Impédance caractéristique: 8 Ω – 1 kΩ
Autres prises	: COMPU LINK-1/ SYNCHRO × 2
Alimentation	: 230 V CA, 50/60 Hz

Dimensions
(W × H × D) : 435 × 133× 332 mm (17-3/16" × 5-1/4 × 13-1/8")
Weight : 4.6 kg (10.2 lbs.)
Accessories : Pin plug cord 2
Remote cable 1

Design and specifications are subject to change without notice.

Abmessungen
(B × H × T) : 435 × 133 × 332 mm
Gewicht : 4,6 kg
Zubehör : Cinchkabel 2
Fernbedienkabel 1

Technische Änderungen vorbehalten !

Consommation : 18 W avec alimentation en circuit
1,6 W avec alimentation hors circuit
Dimensions
(L × H × P) : 435 × 133 × 332 mm
Poids : 4,6 kg
Accessoires : Câble à broches 2
Câble de télécommande 1

Présentation et caractéristiques modifiables sans préavis

SPECIFICATIONS

(B-version)

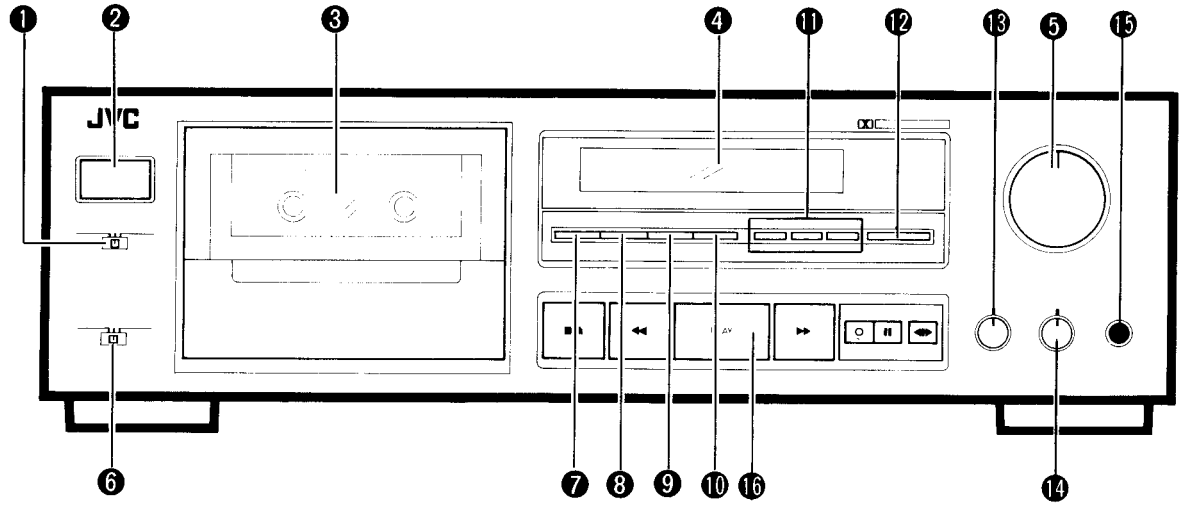
Type : Stereo cassette deck
Track system : 4-track, 2-channel
Tape speed : 4.8cm/sec
Frequency response : (-20 dB recording)
Type IV tape;
30 - 16,000 Hz (± 3 dB)
Type II tape
30 - 15,000 (± 3 dB)
Type I tape
30 - 15,000 (± 3 dB)
S/N ratio : 58 dB (S = 315 Hz, k3 = 3 %, N = A-weighted, Type IV tape)
The S/N is improved by about 15 dB at 500 Hz and by max. 20 dB at 1 kHz ~ 10 kHz with Dolby C NR on and improved by 5 dB at 1 kHz and by 10 dB at above 5 kHz with DOLBY B NR on.
Improvement of MOL : 4 dB at 10 kHz with Dolby C NR on.
Wow and flutter : ±0.2 % (DIN/IEC)
Channel separation : 40 dB (1 kHz)

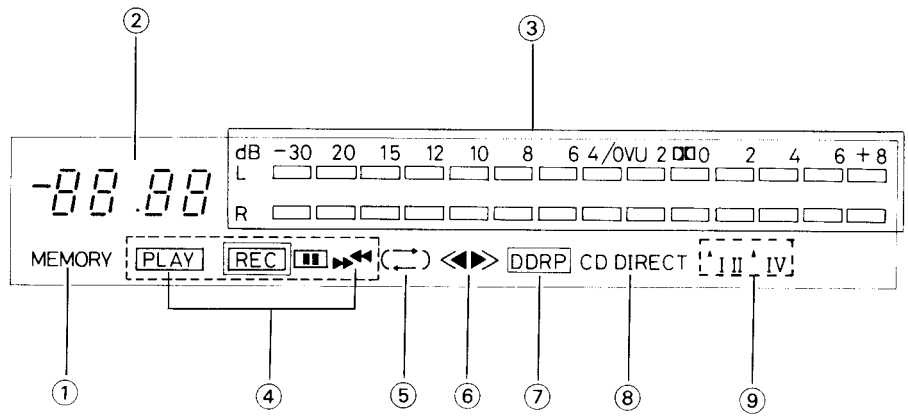
Crosstalk : 60 dB (1 kHz)
Harmonic distortion : k3; 0.8% (Type IV tape, 1 kHz, 0 VU)
Heads : METAPERM head for recording/playback, 2-gap ferrite head for erasure; Combination head × 1
Motors : Electronic governed DC motor for capstan × 1,
DC motor for reel × 1,
DC motor for mechanism × 1
DC motor for cassette holder × 1
Fast forward/Rewind time : Approx. 100 sec. with C-60 cassette
Input terminals
CD DIRECT (× 1 circuit) : Input sensitivity; 80 mV (0 VU)
Input impedance; 50 kΩ
LINE IN (× 1 circuit) : Input sensitivity; 80 mV (0 VU)
Input impedance; 50 kΩ

Output terminals
LINE OUT (× 1 circuit) : Output level; 300 mV (0VU)
Output impedance; 5 kΩ
PHONES × 1 : Output level; 0.3 mW/8 Ω (0 VU)
Matching impedance; 8 Ω – 1 kΩ
Other terminals : COMPU LINK-1/ SYNCHRO × 2
Power requirement: : AC 240 V, 50/60 Hz
Power consumption : With power switch on 18 W
With power switch standby 1.6 W
Dimensions
(W × H × D) : 435 × 133 × 332 mm
Weight : 4.6 kg
Accessories : Pin plug cord 2
Remote cable 1

Design and specifications are subject to change without notice.

NAMES OF PARTS AND THEIR FUNCTIONS





❶ **TIMER switch**
When an optional timer is used, recording and playback can be performed at any desired time. (See page 39).

❷ **POWER switch**

❸ **Cassette holder**

❹ **MULTI MODE display**
① **MEMORY Indicator**
② **Tape counter/digital peak indicator**
③ **PEAK LEVEL METER**
0 dB: IEC (DIN) STANDARD LEVEL (250 nWb/m)
0 VU: EIAJ STANDARD LEVEL (160 nWb/m)
DD : DOLBY NR STANDARD LEVEL
④ **Mechanism mode indicator**
⑤ **Reverse mode indicator**
⑥ **Direction indicator**
⑦ **DDRP indicator**
⑧ **CD DIRECT input indicator**
⑨ **Tape types and recording guide indicators**

❺ **INPUT LEVEL control**
Adjust the recording level with this control.

❻ **REVERSE MODE switch**

❼ **MEMORY button**
(See page 19.)

❽ **RESET button**
Press to reset the tape counter to "0.00".

❾ **DISPLAY MODE button**
Select the digital counter mode. When the power is turned on, it changes the counter and if pressed this button, it changes digital peak indicator.

❿ **DIGITAL PEAK CALL button**
Press to call up the stored (memorized) maximum value or to reset the memory, in the digital peak indicator mode (See page 25.)
This function is available when the display is set to the DIGITAL PEAK mode with the DISPLAY MODE button.

⓫ **DOLBY NR switches**
Set to B or C for recording using the Dolby NR system or for playing back a tape that was recorded using the Dolby NR system. Set to OFF when the Dolby NR system is not used.

⓬ **CD DIRECT switch**
ON: Press this switch to set to ON when recording directly from a CD player.
OFF/LINE: Press this switch to set to OFF/LINE when recording from a stereo amplifier.

⓭ **BIAS adjust control**
Adjust recording bias according to the characteristics of the tape used for recording. (See page 27.)

⓮ **BALANCE control**
Adjusts the balance between the signals input via the left and right LINE IN jacks. (See page 21.)

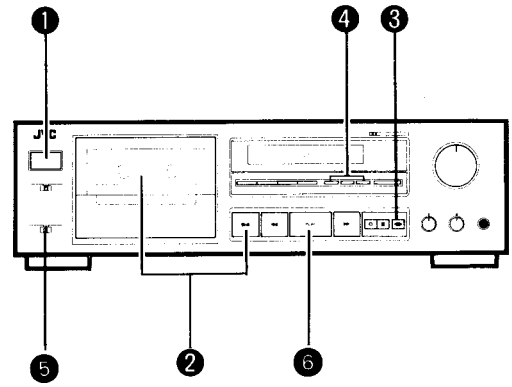
⓯ **PHONES jack**
Connect headphones (with an impedance of 8 Ω to 1 kΩ).

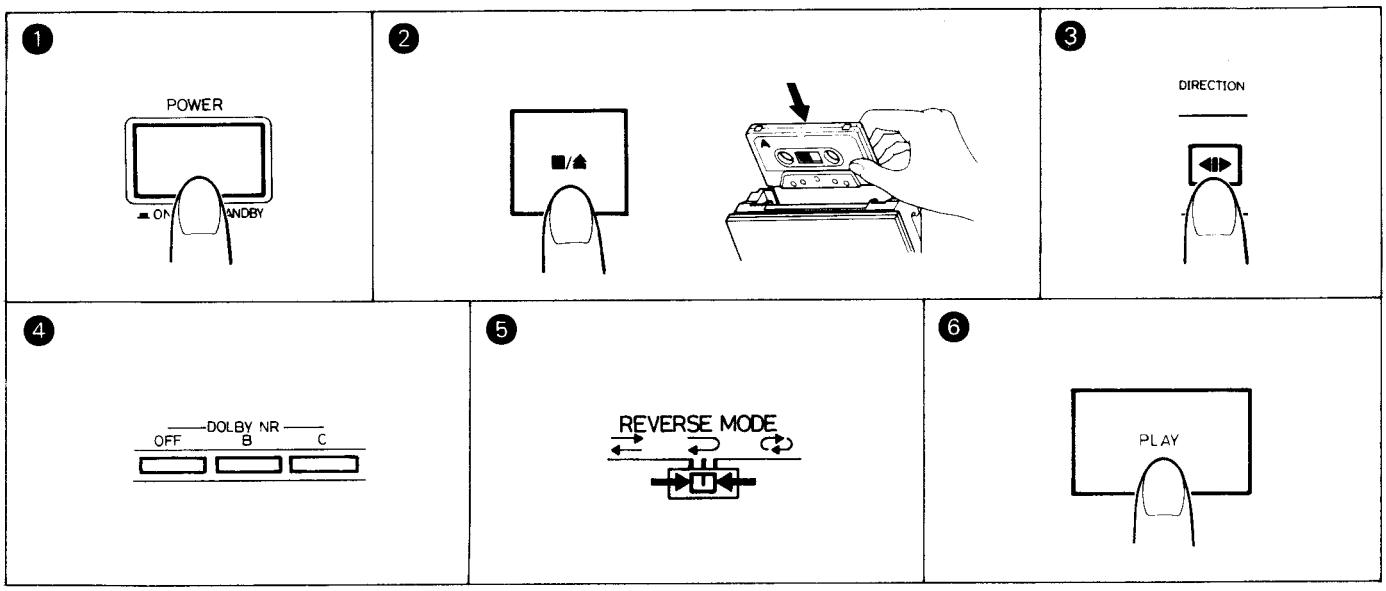
⓰ **Cassette operation buttons**
■ / ▲ STOP/EJECT: Press to stop the tape. Pressing this button after the tape stops, opens the cassette holder.
◀◀ (rewind): Press to rewind the tape.
PLAY: Press to start recording/playback. Press this button with either the ◀◀ or ▶▶ button for music scanning.
▶▶ (fast forward): Press to fast forward the tape.
O REC/REC MUTE: Press the PLAY button while pressing this button to start recording, and press to leave an appropriate non-recorded section. (See page 29.)
❚❚ PAUSE : Press to stop the tape temporarily during recording and playback. Press the PLAY button to release the pause mode.
◀▶ DIRECTION: Press to change the direction of tape travel.

PLAYBACK

Operate in the order of the numbers in the illustration.

1. Press the POWER switch to set to ON (▬).
2. Load a prerecorded cassette with side A facing out.
3. Select the side to be played back.
   Side A... Forward direction
   Side B... Reverse direction
4. Press the same DOLBY NR switch that was pressed when the tape was recorded.
5. Select the REVERSE MODE. (See page 35.)
6. Press the PLAY button to start playback.
   - To stop playing back midway.....Press ■ / ▲ STOP/EJECT button.





Tape counter display
When the power is turned on, "0.00" appears on the display. When the tape runs, the counter functions as a linear tape counter. The running time is displayed in minutes and seconds (countdown function included). Since the counter is not a clock, there may be a discrepancy between the actual recording and playback times. This discrepancy will vary depending on the length of the tape and the hub diameter.

To set the counter to "0.00".
Press the RESET button. (The counter is also reset when the power is switched off and on again.)

Music scan
The music scan mechanism functions by detecting non-recorded sections between tunes. The lengths of non-recorded sections should be more than 4-5 sec for Music Scan to be effective.

1. Press the PLAY and ◂◂ (or ▸▸) buttons simultaneously.
   - "PLAY" blinks when scanning.
2. When a non-recorded section is detected, playback starts automatically.

- Since this unit is equipped with an auto reverse mechanism, music scan is performed as follows according to the tape direction.

Direction \ Operation button	When the PLAY and ◂◂ buttons are pressed	When the PLAY and ▸▸ buttons are pressed
▶▶ (Forward direction)	Previous or present tune	Following tune
◀◀ (Reverse direction)	Following tune	Previous or present tune

Notes:
In the following cases, the mechanism may not operate correctly. This is not a malfunction; use the mechanism according to the type of program.

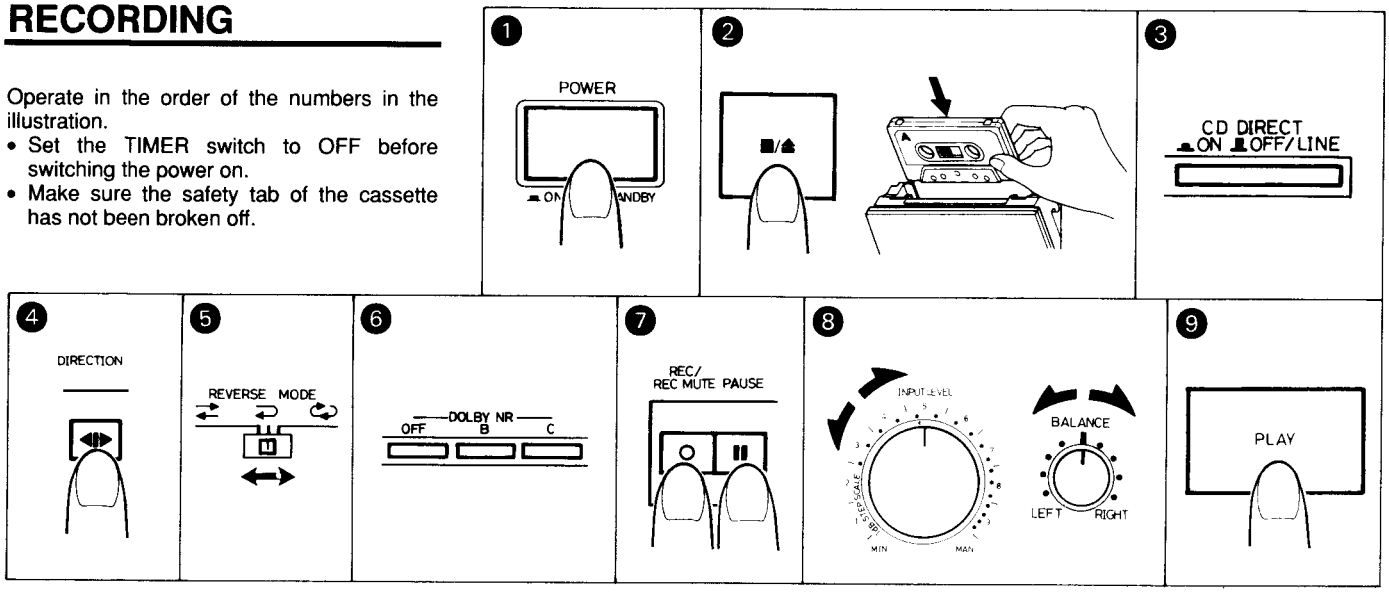
- Tapes with tunes having long pianissimo passages (very quiet parts) or non-recorded portions during tunes
- Tapes with short non-recorded sections
- Tape with noise or hum between tunes

Memory button
Press the MEMORY button at the point to which you want the tape to be rewound and from which you want to listen to during recording or playback.
The tape stops automatically at the point where the MEMORY button is pressed in either the fast forward or rewind mode.

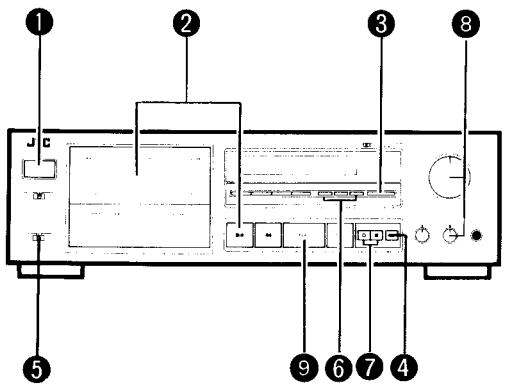
- The point where the MEMORY button is pressed is stored during any mode (recording, playback or stop), but the memory function (automatic stop) operates only in the fast forward or rewind mode.
- If pressing the memory button again, the memory will be cleared. It will also be cleared if pressed the RESET button and reset the counter to "0.00".

RECORDING

Operate in the order of the numbers in the illustration.
- Set the TIMER switch to OFF before switching the power on.
- Make sure the safety tab of the cassette has not been broken off.



- **Manual recording**



1. Press the POWER switch to set to ON (⏏).
2. Load a cassette for recording with side A facing out.
3. Select the recording input.
4. Select the side to be recorded.
   Side A... Forward direction
   Side B... Reverse direction
5. Select the REVERSE MODE. (See page 35.)
6. Set the DOLBY NR switch as required.
7. Press the ⏸ PAUSE button and ○ REC/REC MUTE button at the same time (record-pause mode).
   The REC and PAUSE indicators light.
8. Adjust the recording level and balance. (See page 25.)
   The BALANCE control only works with line input.
9. Press the PLAY button to start recording.

WARNING
It may be unlawful to record or playback copyrighted material without the consent of the copyright owner.

DDRP (Dynamics Detection Recording Processor) recording

- DDRP recording is performed with suitable JVC CD players and the recording level adjustment is performed automatically.
- Since recording level adjustment is performed automatically for different types of tape (normal, CrO_2 and metal), the adjustment of INPUT LEVEL and BALANCE controls are not required.
- Read the instruction book of your CD player carefully.

DOLBY NR and DOLBY HX-PRO

Dolby NR System
To reduce the hiss inherent in tape recording, use the Dolby NR System when making recordings. When listening to a tape recorded with the Dolby NR System, set the DOLBY NR switch to B or C according to the system selected in the recording mode.

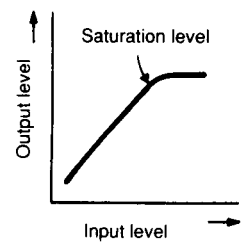
Note:
The sound quality will change if the positions of the DOLBY NR switch are different in recording and playback.

Dolby HX PRO headroom extension
When a source which contains many high-frequency components is recorded, these high-frequency signals have the same function as bias and therefore, the effective bias current changes. This will result in phenomena such as changes in the level of low-frequency signal and subsequent distortion and reduction of the high-frequency saturation level.
Dolby HX PRO headroom extension system controls the bias current so that the effective bias is constant even when there are fluctuations in the high-frequency components of the input signal.
This greatly improves the high-frequency saturation level while reducing the low-frequency signal level variations and distortion.
- The dynamic sound recorded with this system sounds the same even when the tape is played back in a deck that does not have Dolby HX PRO.
- This system automatically works when in recording; however, Dolby HX PRO is not a noise reduction system.

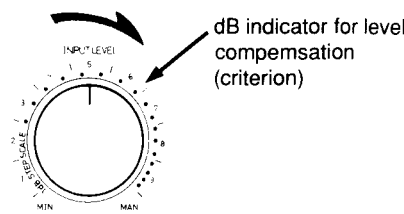
DIGITAL PEAK indicator and its use in recording level adjustment

It is best to adjust so that the maximum sound level of the source to be recorded reaches the very limit of the saturation level of the tape to be used.
- When the recording level is too low, the hiss noise inherent in the tape will be conspicuous.
- When the recording level is too high, exceeding the saturation level, the recording will contain cracking noise and will be distorted.

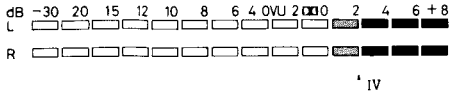
Saturation level means:
When the recording input is increased gradually, the output increases proportionally. However, once it reaches a certain level, the output cannot increase any further. Moreover, the output will be distorted if the input is increased beyond this point. The level at which this occurs is called the tape's "saturation level".



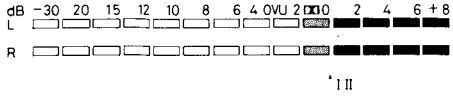
How to adjust the recording level
1. Set to the record-pause mode.
2. Adjust the recording level using the INPUT LEVEL control.



With metal tape
Because of metal tape's higher saturation level, it is OK that "+ 2" lights occasionally.



With normal or chrome tape
It is OK that "0" lights occasionally.



Digital Peak Indicator
When the counter mode is set to digital, the counter changes to a digital peak indicator. This is a digital display that shows the recording/playback level and is interlocked with the peak level meter under the control of the meter microcomputer. A maximum peak level memory function is provided so that the peak level can be checked after as well as during recording.

For 0 dB and under: 0

For +8 dB and over: 8

Calling up the maximum level and resetting the memory
When the DIGITAL PEAK CALL button is pressed once, the peak level held in memory flickers in the display for approximately 5 seconds. If the DIGITAL PEAK CALL button is pressed again while the peak value is displayed, the previous contents of memory will be cleared and this newly input maximum level will be held in memory as the peak level. In addition, the digital peak function holds the level of whichever of the left or right channels is the higher and displays it.

Adjustment of Recording Bias
There are various types of cassette tapes, and their characteristics differ slightly even when they are of the same type. Generally, the bias current and equalization characteristics suitable for the type of tape being used can be obtained by the Auto Tape Select system. However, to optimize the response of the tape to be used, it is better to adjust the recording bias so that distortion is minimized and the frequency characteristics are as flat as possible.

- Turn the BIAS adjust control clockwise (in the + direction) to increase the bias current; high frequencies are attenuated and distortion decreases.
- Turn the BIAS adjust control counterclockwise (in the - direction) to decrease the bias current; high frequencies are emphasized and distortion increases.

Notes:
- When adjusting the bias current, we recommend a source which makes it easy to check high frequencies, such as one containing cymbals. When you can hear the noise between tunes in FM broadcasts, be sure to adjust the recording level to below –10 dB.
- Because of the different characteristics of cassette tapes, adjusting the bias with the BIAS adjust control has more effect on the frequency characteristics of normal and high bias tapes than metal tapes.

Erasing
When recording on a prerecorded tape, the previous recording is automatically erased and only the new program is recorded on the tape. To erase a tape without making a new recording... Follow the section "RECORDING" but in step ❺, set the INPUT LEVEL control to MIN.

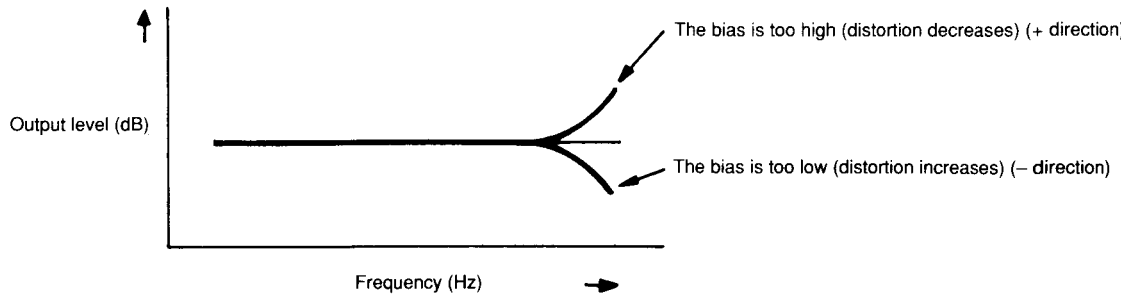
Automatic record muting
This facility is used to eliminate undesired sections and leave an appropriate non-recorded section.

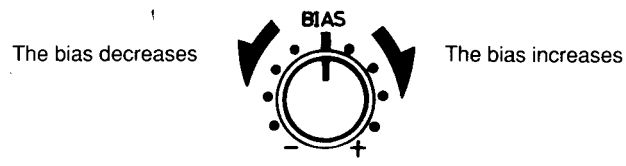
A. To leave non-recorded sections of about 4-5 seconds automatically
❶ When the undesired section comes during recording, press the O REC/REC MUTE button and release it.
❷ The REC indicator flashes and a non-recorded section is made during record muting operation.
About 4-5 seconds later, the tape automatically stops, and the unit enters the record-pause mode.
❸ Press the PLAY button to start recording again.

B. To leave non-recorded sections of more than 4-5 seconds
❶ Keep the O REC/REC MUTE button pressed continuously as long as you want to make a non-recorded section. By releasing the finger from the button after the above operation, the unit enters the record-pause mode.
❷ Press the PLAY button to start recording again.

C. To leave non-recorded section of less than 4 seconds
- When the undesired section comes during recording.... After the O REC/REC MUTE button is pressed, press the PLAY button before the unit enters the pause mode to start recording again, or press the ▮▮ PAUSE button to enter the record-pause mode.
- The PEAK LEVEL INDICATOR lights even during record muting according to the input level which can be heard from the speakers or headphones so that recording can be resumed at the exact point on the tape.

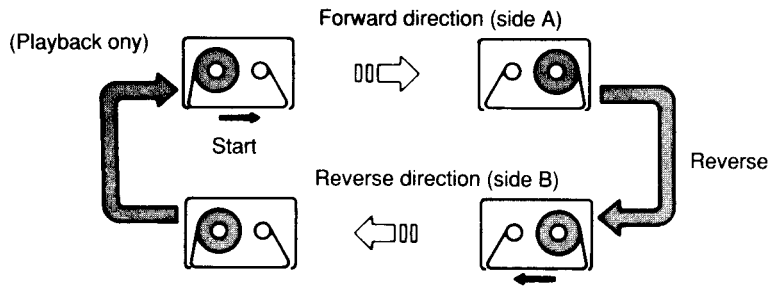
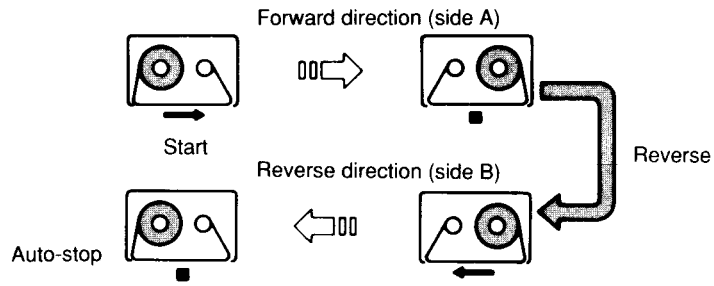
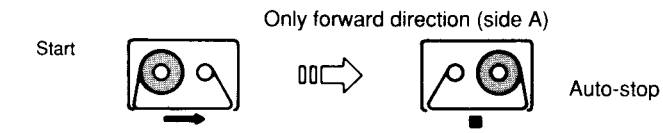
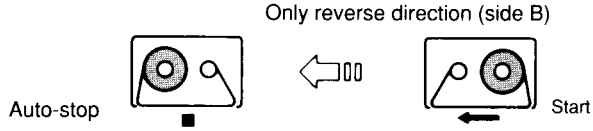
CD DIRECT input
When a CD player or other component is connected to the CD DIRECT terminals as shown in "CONNECTIONS" on page 11, a direct signal will be input without passing through the stereo amplifier.
Also, since the BALANCE control of the deck is no longer be concerned, the signal path will be shortened and sound quality can be improved. To record with these sources, set the CD DIRECT switch according to the input.





AUTO-REVERSE

- Press the ◀▶ DIRECTION button to select the tape transport direction.
- In the following explanation, side A is loaded into the cassette holder facing out (toward you).

Reverse mode	Explanation	Tape direction indicator
Continuous REVERSE MODE	 • During recording, the tape stops automatically at the end of side B.	▶▶ ◀◀
Full REVERSE MODE	 • When the tape is played or recorded in the reverse direction (side B), only side B is played back or recorded and then the tape stops automatically.	▶▶ ◀◀
Single REVERSE MODE		▶▶
		◀◀

A quick reverse auto reverse mechanism is provided in this deck. With this system, an infrared sensor detects light reflected from the splicing tape between the coated tape and leader tape to switch the tape travel direction.
In case of a cassette without leader tape, the direction is changed automatically at the end of tape.

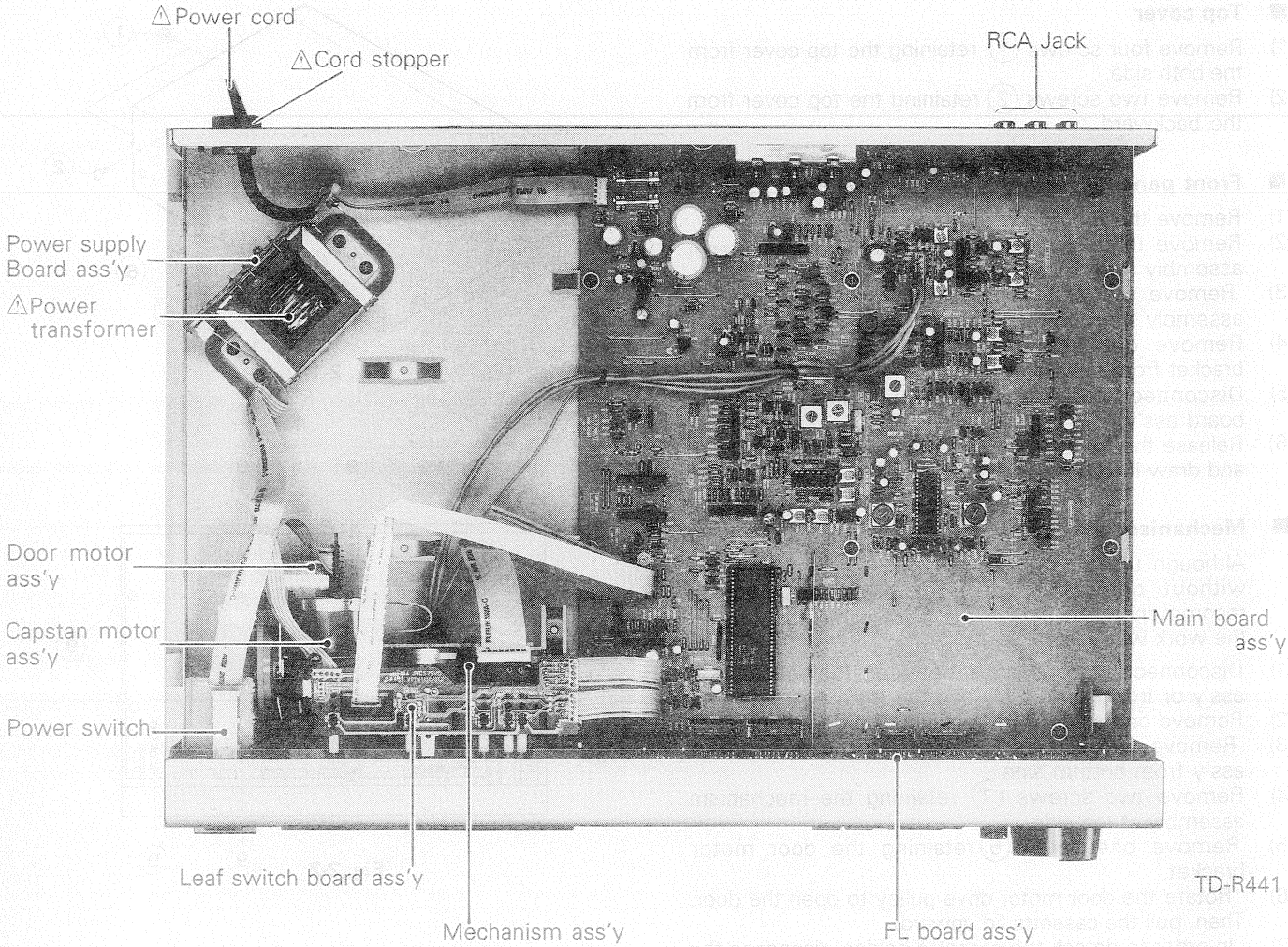
- Due to the inevitable variation in cassette shell construction, it is recommended that tapes recorded in the forward direction on one side be played back in the forward direction on the same side to assure stable sound reproduction.
- During recording, auto reverse can be activated only from the forward to the reverse direction.

For satisfactory sound quality and to avoid accidental erasure of previously recorded material, it is recommended to always use cassettes with side A facing you.

Notes:

- For about 15 seconds, after entering either the record or playback mode, the auto reverse mechanism will not function since the infrared sensor is designed not to function during this period.
- To avoid malfunctioning of the infrared sensor, do not expose the head section to direct sunlight.
- To avoid malfunctioning of this unit, do not use wrinkled tape.
- Due to the location of the infrared sensor, when the operating mode of the deck switches from the reverse direction to the forward direction at the end of the tape, the leader section of tape passes by the head, resulting in about a 1-second blank interval in the sound being listened to.

1 Location of Main Parts



2 Removal of Main Parts

■ Top cover

1) Remove four screws (1) retaining the top cover from the both side.
2) Remove two screws (2) retaining the top cover from the backward.

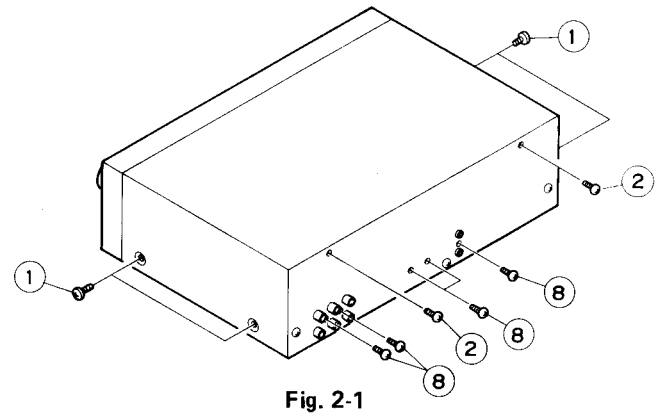


Fig. 2-1

■ Front panel assembly

1) Remove the top cover
2) Remove three screws (4) retaining the front panel assembly from bottom side.
3) Remove two screws (3) retaining the mechanism assembly from bottom side.
4) Remove one screw (5) retaining the door motor bracket from top side.
5) Disconnect connector CN616 in the headphone board ass'y.
6) Release the front panel from the pawls of the chassis and draw it to the front side.

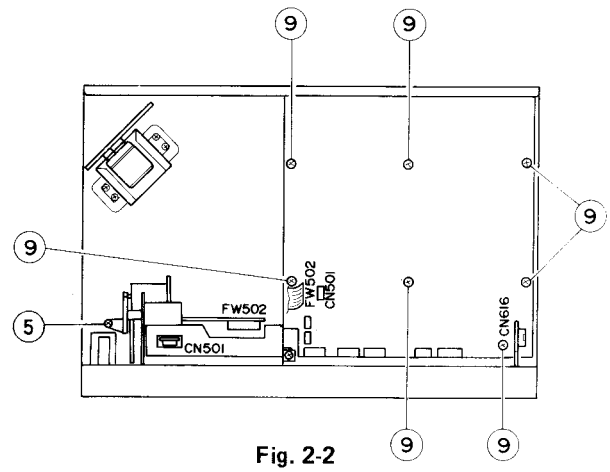


Fig. 2-2

■ Mechanism assembly

Although the mechanism assembly can be removed without detaching the front panel ass'y, it is recommended to detach the front panel ass'y to do the work with ease.

1) Disconnect all connectors between the mechanism ass'y or front panel ass'y and the main board.
2) Remove one screw (6) retaining the door damper.
3) Remove two screws (3) retaining the mechanism ass'y from bottom side.
4) Remove two screws (7) retaining the mechanism assembly at top side.
5) Remove one screw (5) retaining the door motor bracket.
6) Rotate the door motor drive pulley to open the door. Then, pull the cassette lid upward.
7) In order to detach the cassette holder, disengage the shafts to the cassette holder arms from the mechanism holder. (Use an ordinary (–) screw driver as shown in Fig. 2-5A.

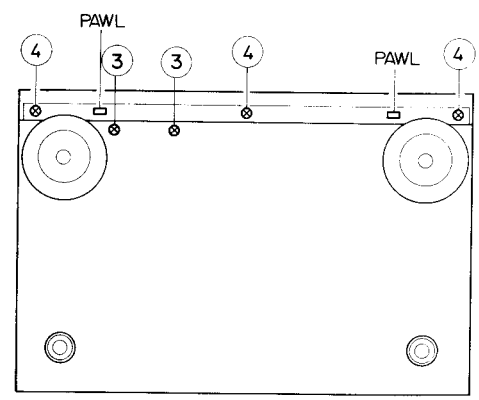


Fig. 2-3

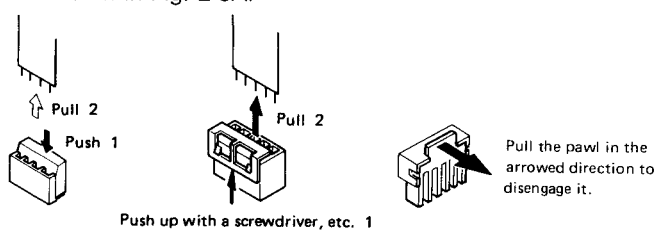


Fig. 2-4

• Reassembling manner of cassette holder

1) Insert the cassette holder into the mechanism holder while keeping the stabilizer parallel with the holder, and put together so that the cassette guide and the inner face of the stabilizer contact with each other.
2) Engage them together with by [3] shown in the figure. (At that time, press arms lightly toward the cassette holder.)
3) Set respective shafts of the cassette holder arms into the holes [2] and [1] of the mechanism holder by use of a screwdriver, etc.
4) Attach the door damper.

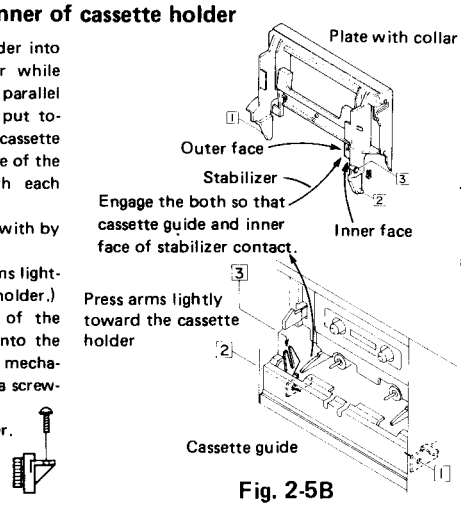


Fig. 2-5B

• Removing manner of cassette holder

To disengage respective shafts of door holder arms [1] and [3] from the mechanism, insert a screwdriver between them and turn it as illustrated or use it as a lever of fulcrum.

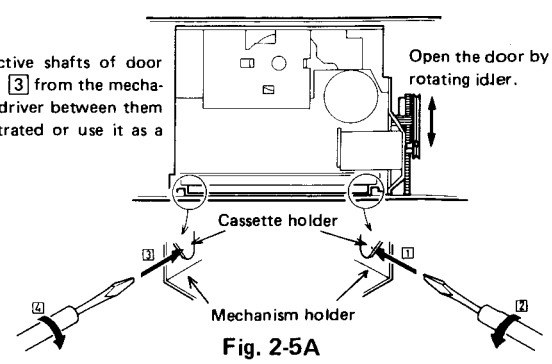


Fig. 2-5A

Fig. 2-5

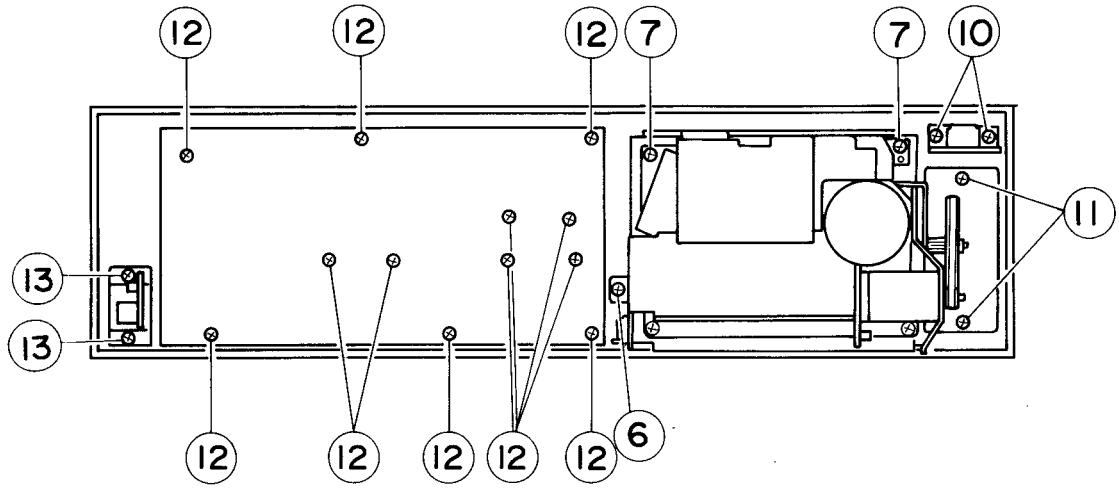


Fig. 2-6

■ **Main board assembly**

1) Remove the front panel ass'y.
2) Remove five screws (8) retaining the Jacks and heat sink from rearward.
3) Remove seven screws (9) retaining the Main board ass'y.

■ **Power switch assembly**

1) Remove two screws (10) retaining the power switch.

■ **Timer/Reverse mode switch assembly**

1) Remove two screws (11) retaining the Timer & Reverse mode switch board ass'y.

■ **Volume/FL indicator/Key switch board**

1) Remove the knobs (Input, Bias, Balance)
2) Remove twelve screws (12) retaining the volume, FL Indicator and Key switch board ass'y.

■ **Head phone Jack ass'y**

Remove two screws (13) retaining the head phone Jack bracket.

■ Cassette mechanism section

■ **Head mount assembly** (Fig. 2-7, Fig. 2-8)

1) Release the head wire relay board from two pawls.
2) Remove two screws (1) retaining the head mount ass'y from the head base.
3) Remove the head gear (1) and head spring.

■ **Pinch roller assembly** (Fig. 2-7, Fig. 2-9)

1) Remove return spring by disengaging the pawl hooking it.
2) Remove the pinch roller spring.
3) For reengaging the spring, refer to the figures (A) and (B).

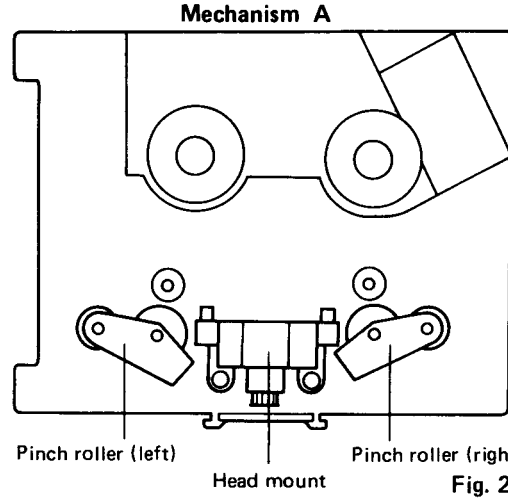


Fig. 2-7

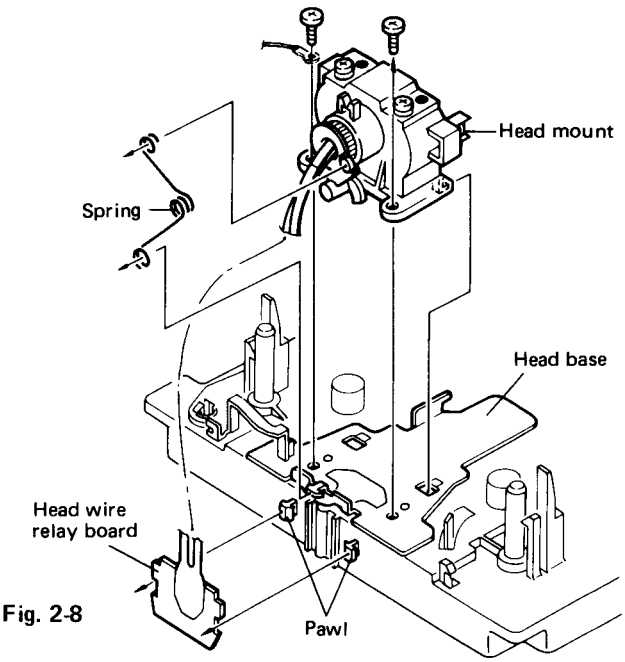


Fig. 2-8

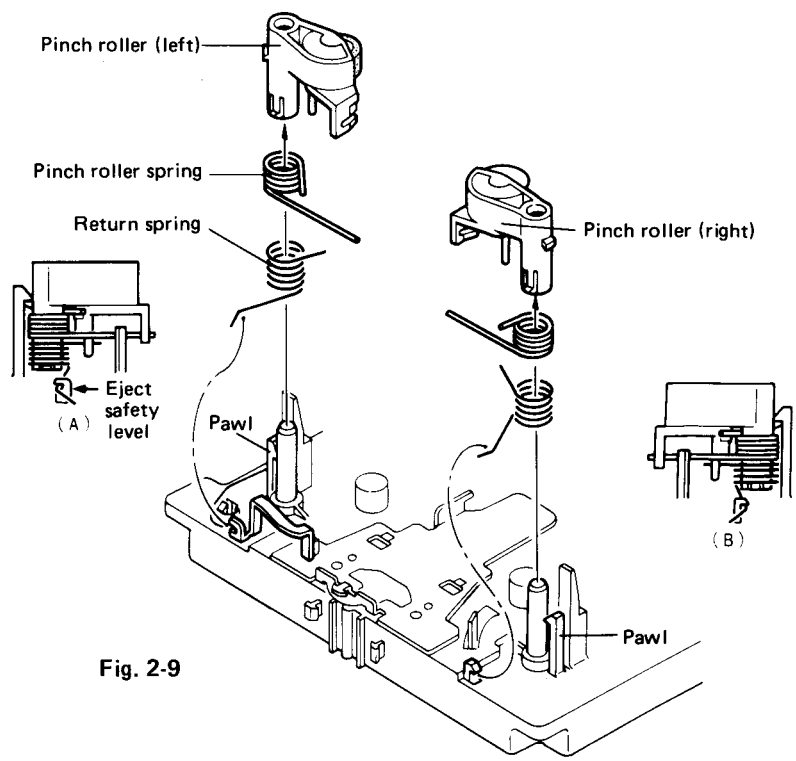


Fig. 2-9

■ **FM bracket/Capstan motor assembly** (Figs. 2-10, 2-11)

1) Remove soldering to separate the drive motor and the motor ass'y. (Mechanism A or B)
2) Remove one screw (2) retaining the FM bracket together.
3) Remove two screws (3) and disengage five pawls, and then the FM bracket and the capstan belt (mechanism A and B) can be removed.
4) Remove two screws (4) retaining the capstan motor from the FM bracket.
5) For reengaging the capstan belt, refer to Fig. 2-12

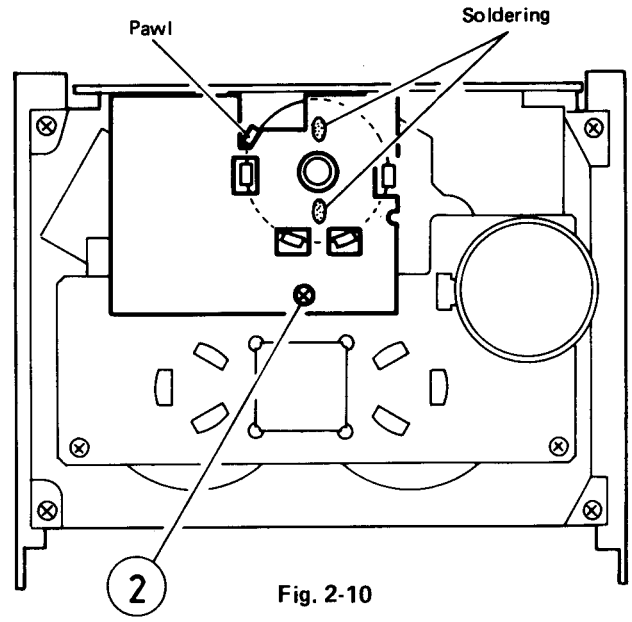


Fig. 2-10

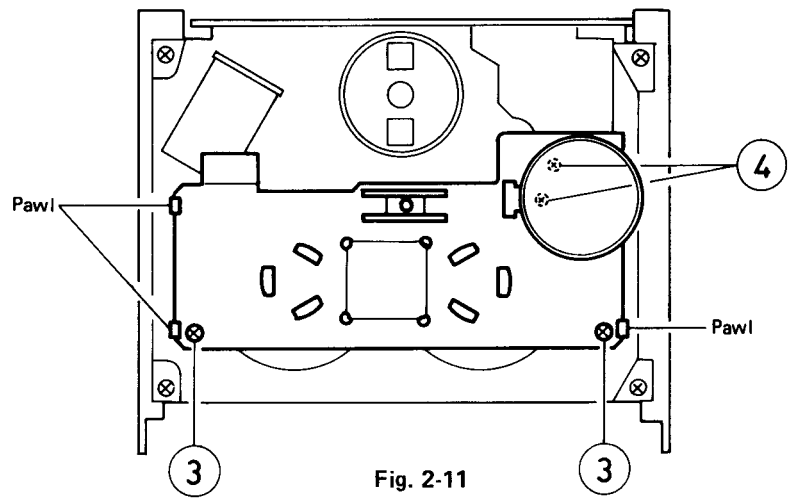


Fig. 2-11

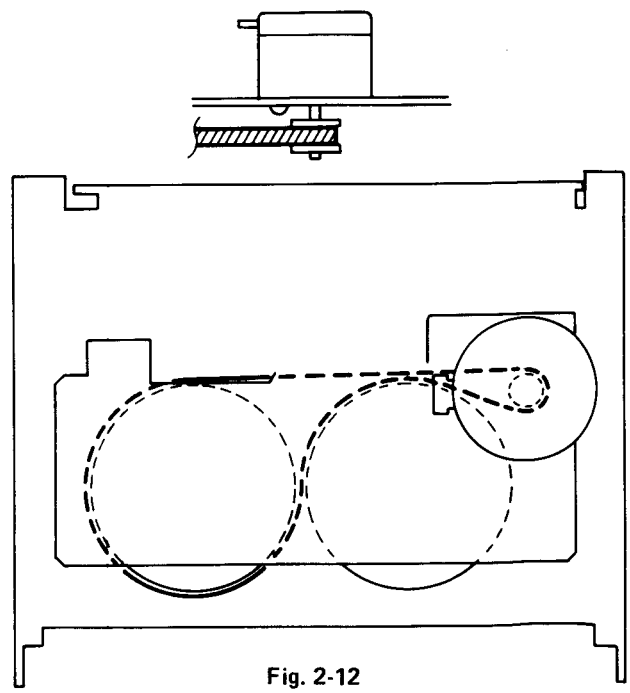


Fig. 2-12

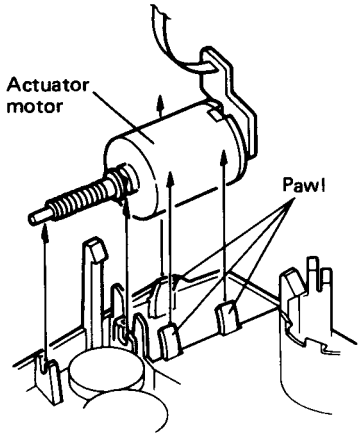


Fig. 2-13

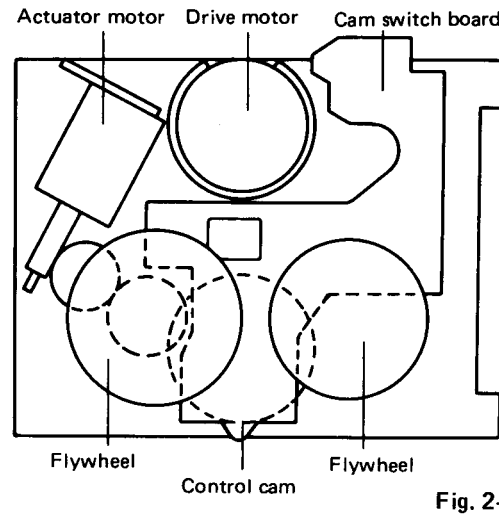


Fig. 2-14

- **Actuator motor assembly** (Fig. 2-13)
  Release the actuator motor ass'y from three pawls.

- **Flywheel assembly** (Fig. 2-14, Fig. 2-15)
  Remove washers from the capstan shaft and draw them out.

- **Drive motor** (Fig. 2-13, Fig. 2-16)

1) Pull out the gear and arm assembly from the drive motor shaft.
2) Remove a screw (5) retaining the drive motor.
3) Disengage four pawls to release the drive motor.

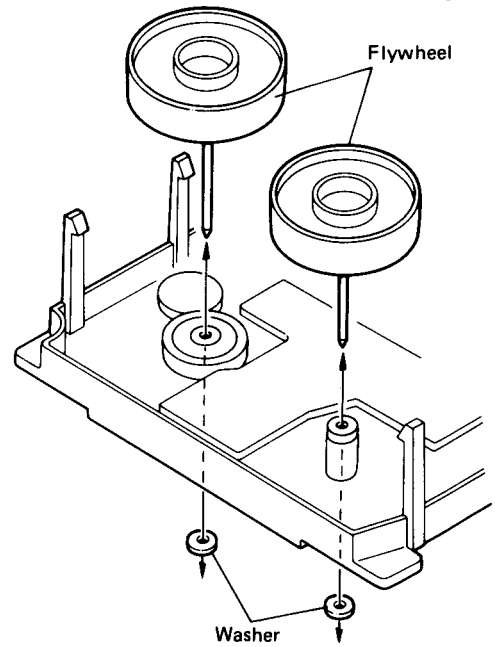


Fig. 2-15

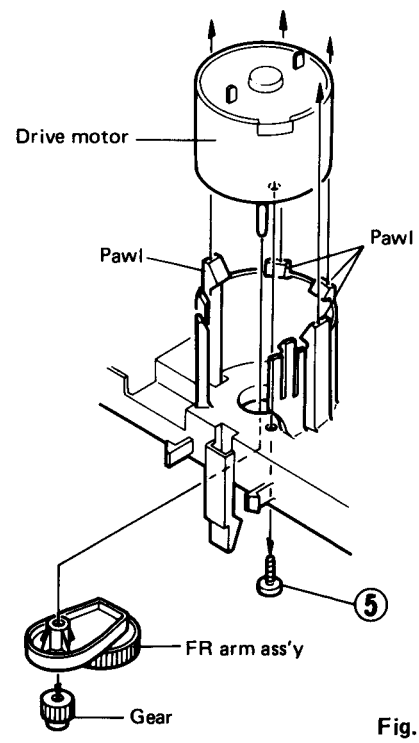


Fig. 2-16

■ **Cam switch board** (Fig. 2-14, Fig. 2-17)
1) Release the cam switch board from six pawls.
2) For gearing between the cam switch board and control cam, see the magnified illustration in a circle.

■ **Actuator gear (large)** (Fig. 2-14, Fig. 2-18)
Release the actuator gear (large) from three pawls.

■ **Control cam** (Fig. 2-14, Fig. 2-18)
1) Release the control cam from two pawls.
2) For assembling the control cam, see the magnified illustration in a circle.

■ **Actuator gear (small)** (Fig. 2-14, Fig. 2-18)
Release the actuator gear (small) from two pawls.

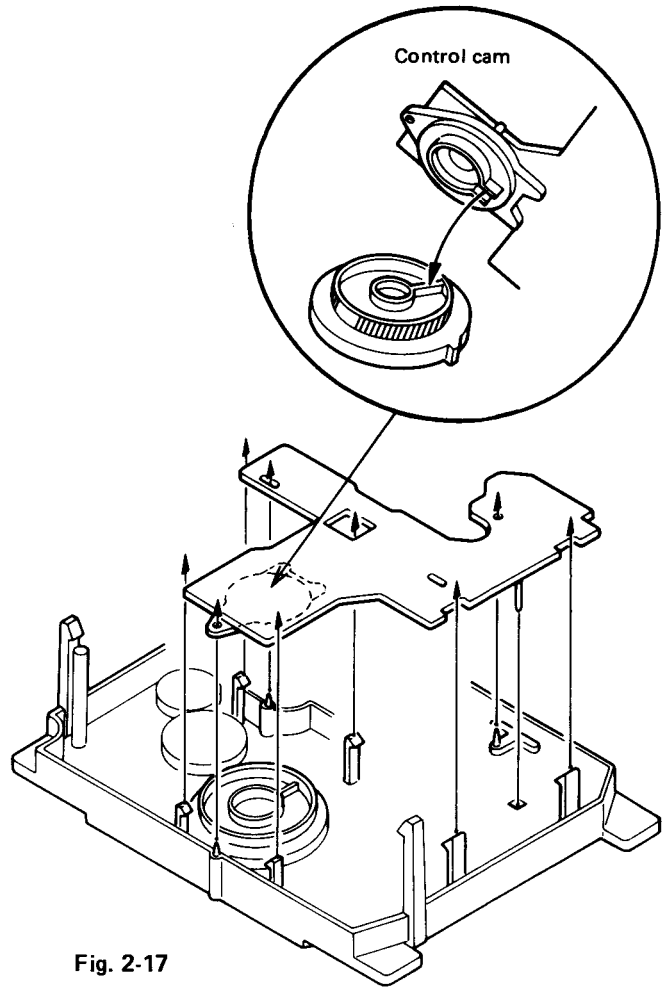


Fig. 2-17

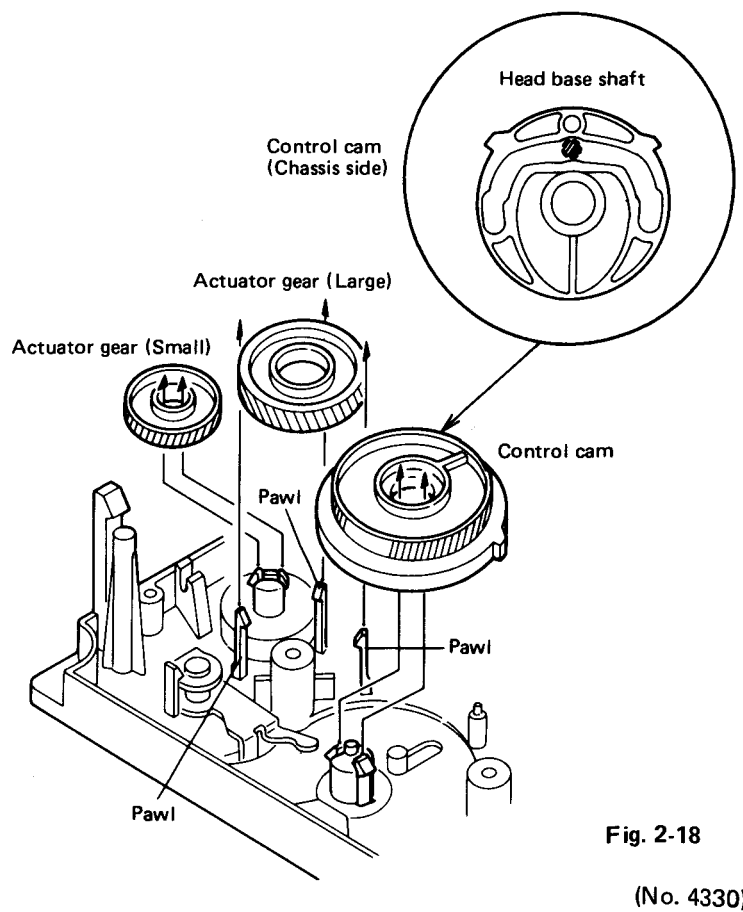


Fig. 2-18

3 Main Adjustments

1. Measuring instruments required for adjustment

(1) Low-frequency oscillator (oscillation frequency 50 Hz – 20 kHz, 0 dB output with 600 Ω impedance)
(2) Attenuator (600 Ω impedance)
(3) Electronic voltmeter
(4) Standard tapes
VTT712 (tape speed, wow and flutter measurements)
VTT724 (reference level)
TMT735, VTT739 (playback frequency)
TMT704 (12.5 kHz) (Azimuth)
(5) Recording reference tapes
TS-12 (UD1), TS-10 (SA), TS-11 (MA) or equivalent
(Use the standard tapes specified by this department.)
(6) 600 Ω resistors (for attenuator matching)
(7) Distortion meter (bandpass filter)
(8) Torque gauge (cassette) for CTG-N mechanism adjustments
(9) Wow & flutter gauge
(10) Frequency counter gauge
(11) M300 gauge
(12) Band pass filter
(13) Standard position of the switch and volume knob

Switches and volume knobs		Setting position
INPUT LEVEL	:	MAXIMUM
BALANCE	:	CENTER
DOLBY NR	:	OFF
TIMER	:	OFF
REVERSE MODE	:	⇄
BIAS ADJUST	:	CENTER
INPUT SELECT	:	LINE

Tape guide adjustment method

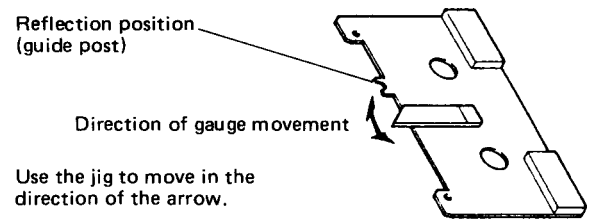


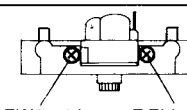
Fig. 3-1

■ **Mechanical Adjustments**

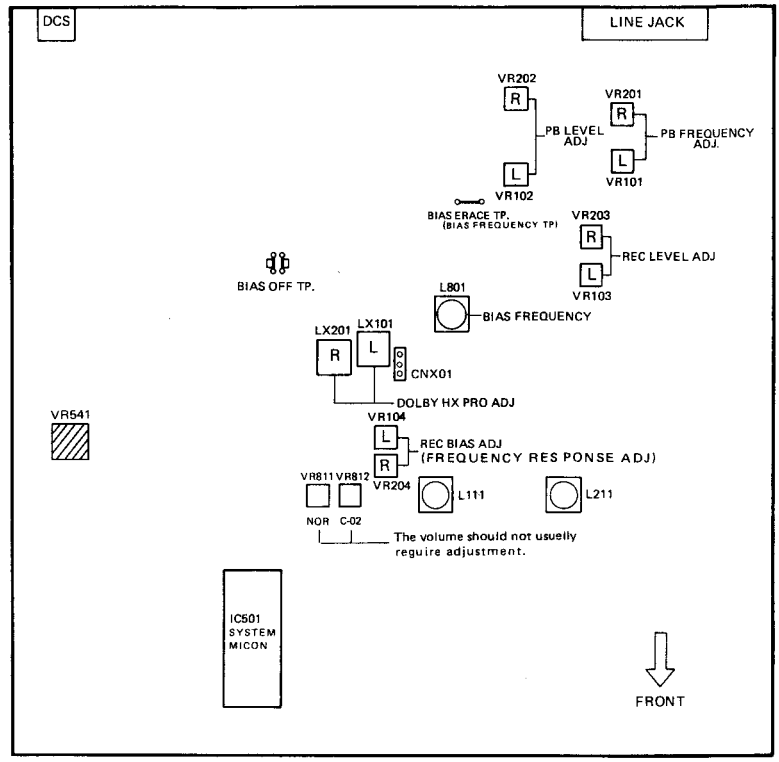
After head replacements, use the following method to check after the height, direction and tilt (rough) of each head have been adjusted.

Tape travel adjustment

Use the M300 gauge. Be sure not to damage the head.

Item	Tape to be used/jig	Standard	Adjustment and checking method	Adjusting points
Azimuth adjustment (1)	Test tape VTT704	Phase deviation should not occur when the output is maximum.	Adjust the FWD side and then the REV side.	

Item	Adjustment	Adjusting point	Standard value	Remarks
Adjusting motor speed	Connect an electronic counter to the LINE OUT terminals. Play back the VTT712 test tape. Adjust the normal speed to 3000 Hz with VR541.	NORM: VR541	NORM speed: 3000 ± 15 Hz	Measure near the tape end of the test tape on the side A.
Checking wow and flutter	Connect a wow and flutter meter to LINE OUT terminals. Play back the VTT712 test tape. Check to see if the reading of the meter is within 0.18% (WTD).		Less than 0.18% (WTD)	If the reading becomes moving value even if conforming to the standard, a reclaim may be raised. Repairs are necessary.
Checking playback torque	Employ a torque testing cassette tape for the checking, or remove the cassette cover and use a torque gauge.		27–60 gr-cm	If the standard torque is not obtained, replace the take-up disc assembly.
Checking fast forward torque	Measure the torque in the fast forward mode in the same manner as in the above.		90–200 gr-cm	
Checking rewind torque	Measure the torque in the rewind mode in the same manner as in the above.		90–200 gr-cm	



■ **Electrical Circuit Adjustment Procedures**

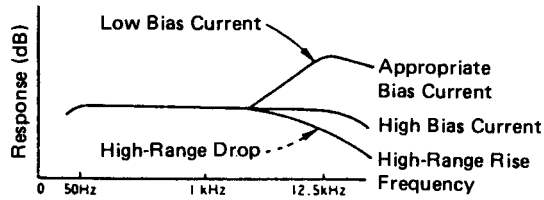
Make the following adjustments after the tape travel and head angle adjustments.

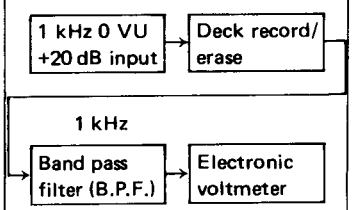
- In principle, the adjustments should be made in the order described.
- Adjustments required after head replacement are marked with an asterisk (*).

0 dBs = 0.775 V

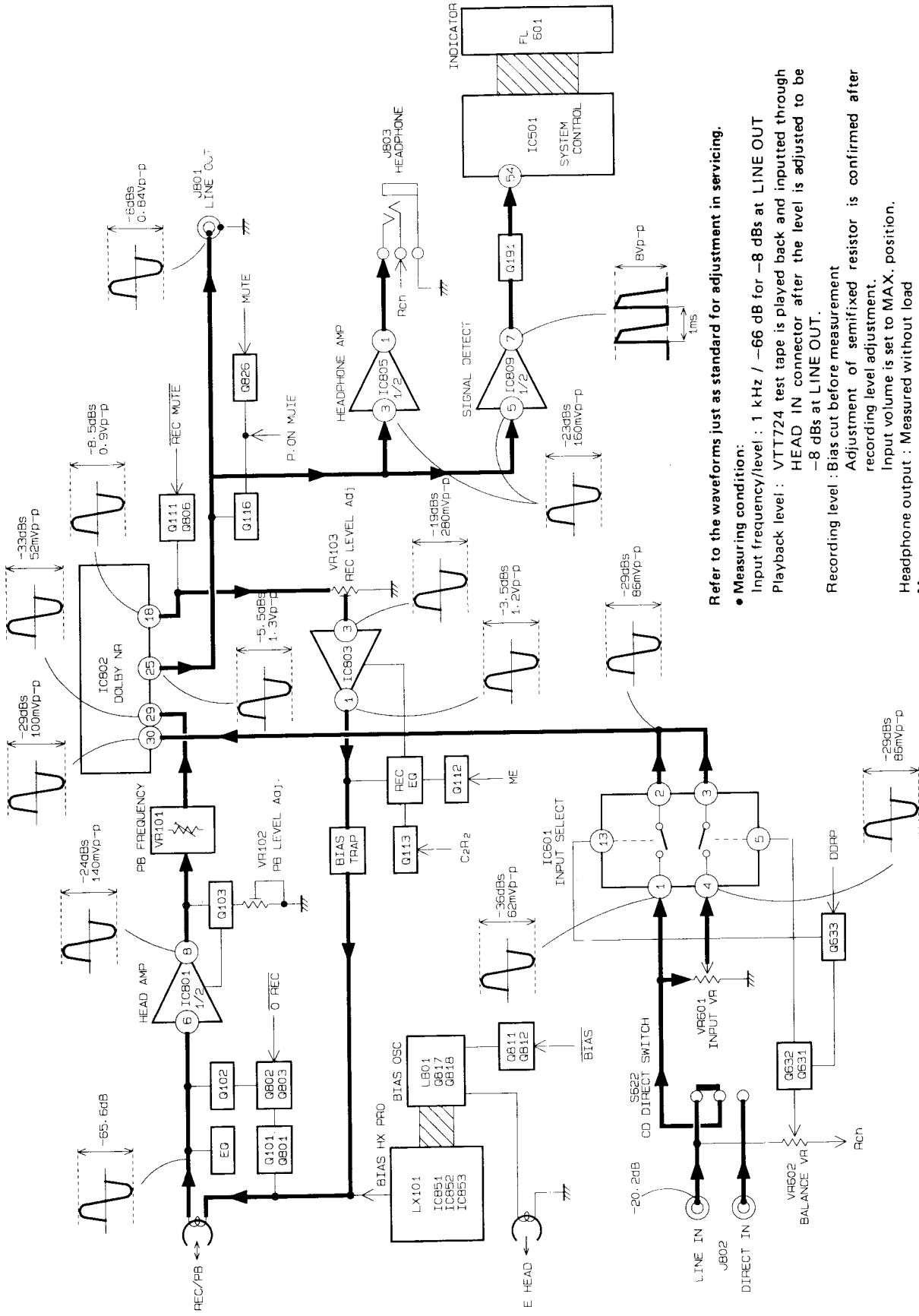
	Item	Adjustment and check methods			
1	Dolby circuit recording check (record mode)			Frequency Level	Output Value and Deviation
		Record Dolby B	INPUT : LINE IN (−8 dBs) Measurement point: ICA01, pins ⑬ ⑱ Measurement point reference level: 400 Hz, −6 dBs (= Cal. level)	1 kHz Cal. −40 dB	+5.7 dB ± 2 dB
				5 kHz Cal. −20 dB	+3.5 dB ± 1.5 dB
				1 kHz Cal.	0 dB $^{+0.5}_{-1.0}$ dB
		Record Dolby C		1 kHz Cal. −40 dB	+16.2 dB $^{+3}_{-2}$ dB
				5 kHz Cal. −20 dB	+2.9 dB ± 2.5 dB
				1 kHz Cal.	0 dB ± 1 dB

	Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
*2	Reference level	In playback of the VTT724, referring to the LINE OUT level is as −8 dBs, all other input and output levels respectively meet the standard value.		LINE OUT:−8 dBs PHONES OUT: −24 dBs LINE IN: −20 dBs ± 2 dB	Input volume: Max. Balance volume: Center Dolby NR: OFF DDRP SW: OFF
*3	Playback level adjustment	1) Play the VTT724 (1 kHz) test tape and adjust VR102 and VR202 so that the LINE OUT output is −7.5 dBs (the L-R channel output difference must be 0.5 dBs or less). 2) Headphone output check: −24 dBs $^{+2.5}_{-1.5}$ dB L-R difference: 2 dB or less	VR102, VR202	−7.5 dBs ± 0.5 dB −24 dBs $^{+2.5}_{-1.5}$ dB	The playback level changes when the head is replaced and must be adjusted. Use an electronic voltmeter with an impedance of 100 kΩ or more.
*4	Playback frequency response adjustment	Play the VTT735 (1 kHz, 12.5 kHz) test tape and adjust VR101 and VR201 so that the output value is standard at 1 kHz and 12.5 kHz.	VR101, VR201	With 12.5 kHz as reference, 0.5 ± 0.5 dB at 1 kHz 63 Hz : +2 ± 3 dB (check)	NR: OFF VTT739 can be used for TMT-735 tape. However, there is a little difference in their specifications as follows: TMT735 (1 kHz, 12.5 kHz) VTT739 (63 Hz, 1 kHz, 10 kHz)
*5	Bias frequency adjustment	Connect the frequency counter to the C822 lead through a 1.0 MΩ resistor, then adjust L801 so that the counter reads 85 kHz.	L801	85 kHz ± 1 kHz	Tape: METAL (Attach a probe to the measuring instrument lead terminal and plug in the connector plug.)
6	HX PRO coil adjustment	In the METAL position recording mode, adjust LX101 and LX201 so that the CNX01(1−2 PIN) and CNX01(2−3 PIN) voltages are minimum.	LX101 LX201	Minimum output value	DC voltmeter Minimum value

	Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
*7	Recording/ playback frequency adjustment	Record 1 kHz at the Ref. −20 dB input, then record 63 Hz and 12.5 kHz and adjust VR104 and VR204 so that the difference between the 63 Hz and 12.5 kHz outputs is the standard value in relation to the 1 kHz output during playback. (Basically, adjust so that the 1 kHz and 12.5 kHz outputs are the standard values.)	VR104 VR204	With 1 kHz as reference, 0.5 ± 0.5 dB at 12.5 kHz 0 dB ± 3 dB at 63 Hz (NR : OFF)	Ref. −20 dB value: −20 dB below the reference input value ≒ −28 dBs. Also adjust for normal tape and the left and right channels. • The bias value is set in accordance with the voltage shift for normal at chrome and metal. • When the bias current is not correctly adjusted, the recording characteristics will become as shown on the left. • Perform the adjustment with the BIAS volume set to the center position.
					
8	Bias volume variable check (Ext. VR)	In recording of 10 kHz input signal at the Ref. −20 dB level, turn the bias VR in '+' (increase) and '−' (decrease) directions and confirm the following by playing back the recorded section. • When VR turned to '+' : 10 kHz signal level decreases, • When VR turned to '−': 10 kHz signal level increases.			
*9	Recording/ playback sensitivity adjustment	1) Input to the LINE IN terminal so that the source monitor output is −7.5 dBs. 2) Adjust VR103 and VR203 so that the recording signal current is −8 dBs during recording and playback. • Perform the adjustment with the BIAS volume set to the center position.	VR103 VR203	Normal: −7.5 dBs ± 0.5 dB Chrome, Metal: −8 dBs $^{+2}_{-1}$ dB	The right and left level difference must be 1 dB or less for both normal and metal. Make adjustment by using normal tape, and make sure that the level fluctuation for chrome and metal tapes is within 1.5 dB, and that the right-left level difference is within 1.0 dB.
10	Maximum output check	Supply 1 kHz signal to the LINE IN terminal in the Rec. monitoring mode, and read non-clipped signal level at the LINE IN terminal.	−	LINE OUT: more than −8 dBs PHONES OUT: more than −16 dBs	
11	DDRP check	With the DDRP switch set to ON, supply 1 kHz, −20 dBs input signal in the Rec Pause mode and check the signal level at the LINE OUT terminal. With the DDRP switch set to OFF, perform the same check as in the above step.	−	Normal: −20.2 dBs ± 2 dB Metal: −17.2 dBs ± 2 dB Normal: −8 dBs ± 2 dB Metal: −8 dBs ± 2 dB	Input volume: No change even when VR is turned. DDRP indicator: Lights. Input volume: Max. position DDRP indicator: Goes out.
13	Recording/ playback distortion check	1) Record a 1 kHz signal so that the LINE OUT output is −8 dBs and the level indicator is +0 dB. 2) Use a distortion meter to check if the output is the standard value during playback.		Normal tape: 2.0% or less Chrome tape: 3% or less Metal tape: 3% or less	Check after adjusting the bias current and recording level.

	Item	Adjustment Method	Adjustment Location	Standard Value	Remarks
14	Recording/ playback S/N ratio check	1) Record a 1 kHz, 0 dB input and then remove the input and record without a signal. 2) Play back this recording and measure the difference between the 0 dB recording and no-signal recording. The standard values must be satisfied.		Normal: 42 dB or more Chrome: 43 dB or more Metal: 43 dB or more	
15	Erase ratio check	1) Apply a 1 kHz signal from LINE IN and adjust the INPUT LEVEL knob so that the input level is −8 dBs. 2) Increase the signal level to 20 dB and record. 3) Rewind and erase the recorded section of the tape. 4) Measure the output ratio between the signal and no-signal sections of the tape with an electronic voltmeter.		55 dB or more	Connect a B.P.F. (band pass filter) between the deck and the electronic voltmeter. 

4 Block Diagram

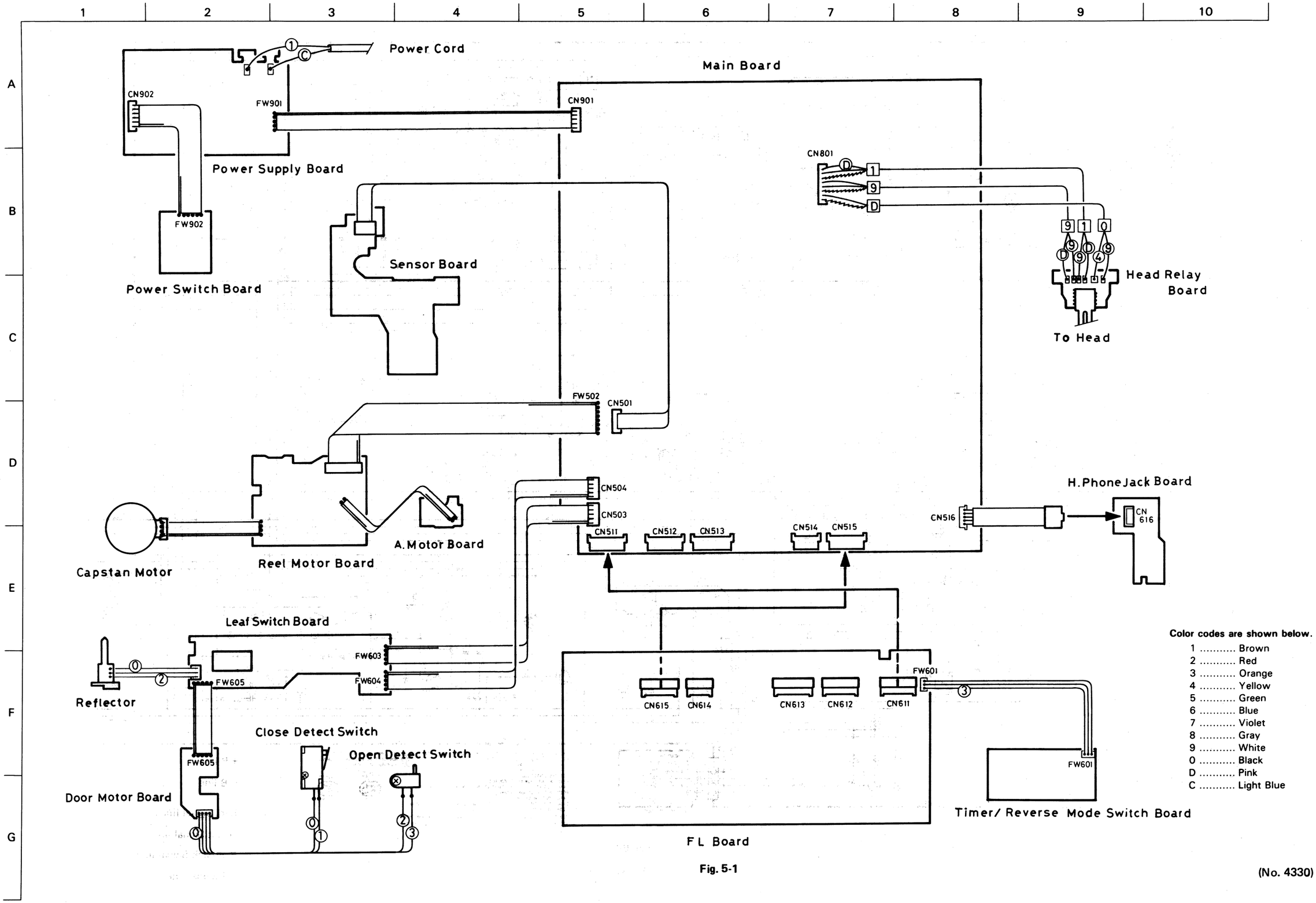


Refer to the waveforms just as standard for adjustment in servicing.

- **Measuring condition:**
  Input frequency/level : 1 kHz / −66 dB for −8 dBs at LINE OUT
  Playback level : VTT724 test tape is played back and inputted through HEAD IN connector after the level is adjusted to be −8 dBs at LINE OUT.
  Recording level : Bias cut before measurement
  Adjustment of semifixed resistor is confirmed after recording level adjustment.
  Input volume is set to MAX. position.
  Headphone output : Measured without load
- **Measurement manner**
  Playback : As standard, HEAD IN signal is measured at test points.
  Recording: As standard, LINE IN signal is measured at test points.
- **Usage of measured value** : For inspection of existence of signal at specified points of each amp. in a mode other than playback or recording.

Fig. 4-1

5 Wiring Connections

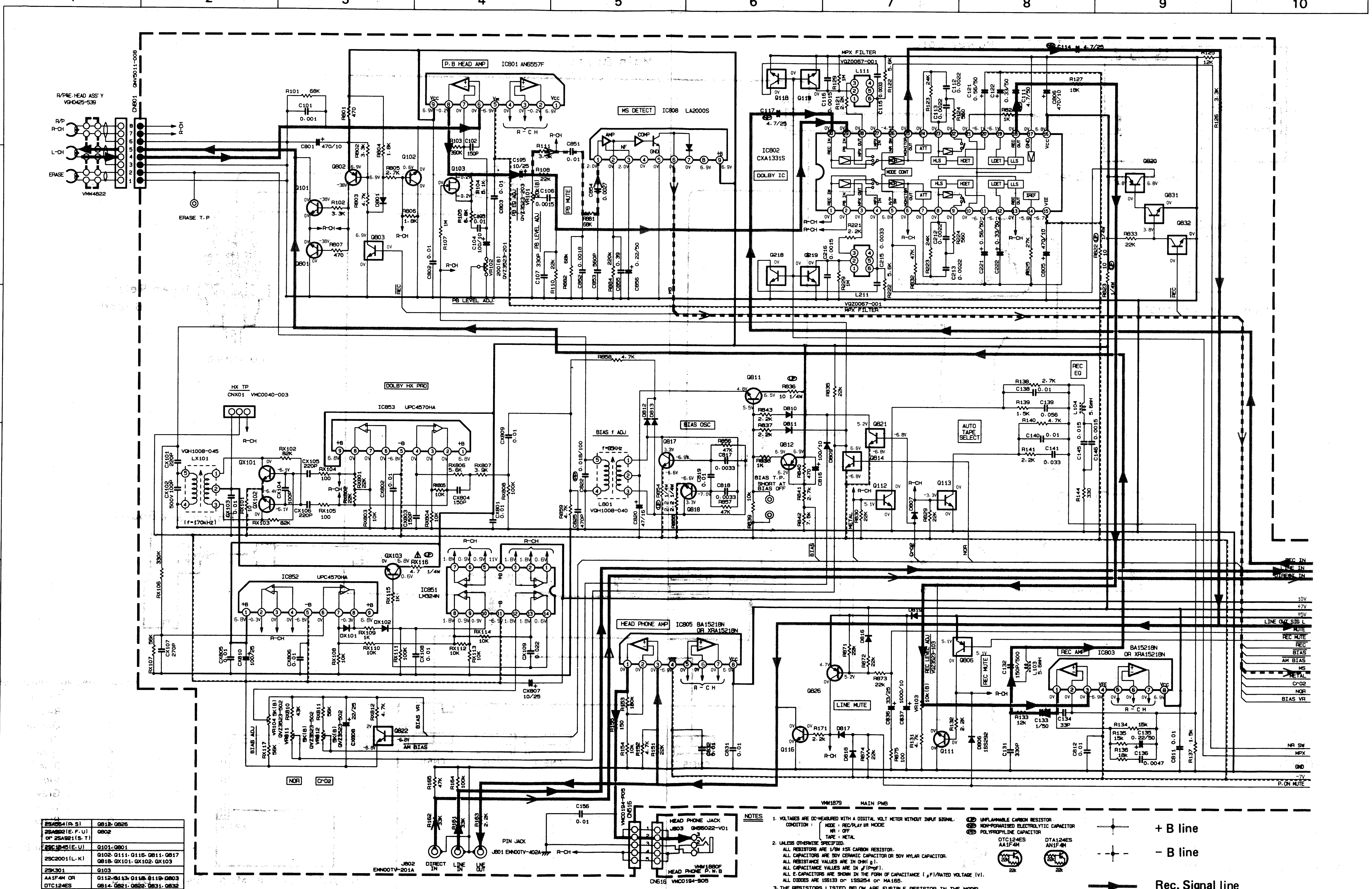


Color codes are shown below.

1 ..... Brown
2 ..... Red
3 ..... Orange
4 ..... Yellow
5 ..... Green
6 ..... Blue
7 ..... Violet
8 ..... Gray
9 ..... White
0 ..... Black
D ..... Pink
C ..... Light Blue

Fig. 5-1

6 Standard Schematic Diagram



2SA564(R.S)	Q812, Q826
2SA992(E.F.U) or 2SA921(S.T)	Q802
2SC1845(E.U)	Q101, Q801
2SC2001(L.K)	Q102, Q111, Q116, Q811, Q817, Q818, QX101, QX102, QX103
2SK301	Q103
AA1F4M OR DTC124ES	Q112, Q113, Q118, Q119, Q803, Q814, Q821, Q822, Q831, Q832
AN1F4M OR DTA124ES	Q806, Q820

NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER WITHOUT INPUT SIGNAL.
   CONDITION : MODE : REC/PLAY ⇄ MODE; NR : OFF; TAPE : METAL
2. UNLESS OTHERWISE SPECIFIED.
   ALL RESISTORS ARE 1/6W ±5% CARBON RESISTOR.
   ALL CAPACITORS ARE 50V CERAMIC CAPACITOR OR 50V MYLAR CAPACITOR.
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   ALL E.CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
   ALL DIODES ARE 1SS133 or 1SS254 or MA165.
3. THE RESISTORS LISTED BELOW ARE FUSIBLE RESISTOR IN THE MODEL
   A/B/E/G/U R901, R902, R913, R921, R836, R823, R920, R822, R852, RX116.

UF UNFLAMMABLE CARBON RESISTOR
NP NON-POLARISED ELECTROLYTIC CAPACITOR
PP POLYPROPYLINE CAPACITOR

DTC124ES AA1F4M — 22k, 22k
DTA124ES AN1F4M — 22k, 22k

+ B line
– B line
Rec. Signal line
Dilect Signal line
Playback Signal line
MS Signal line

Fig. 6-1

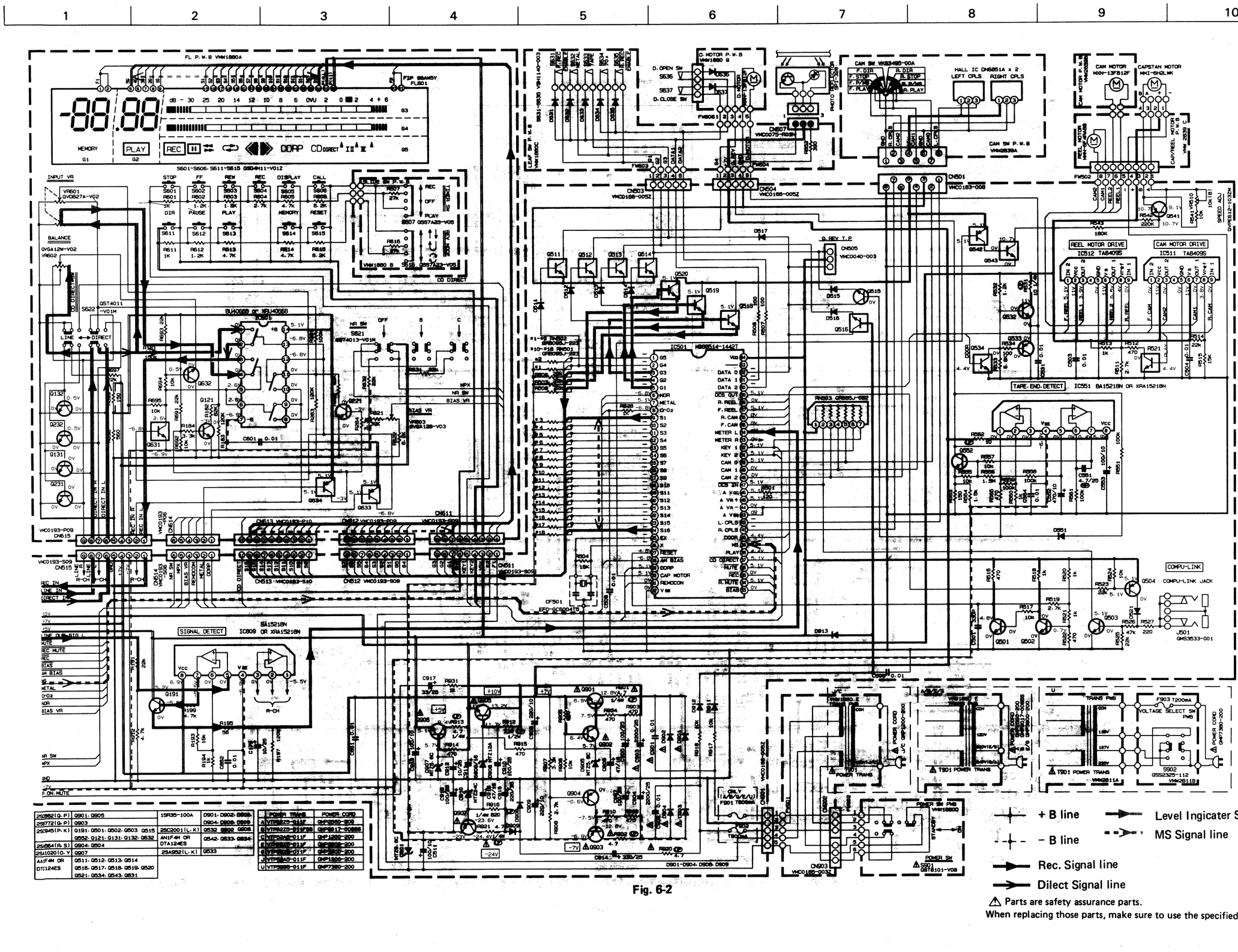


Fig. 6-2

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

TD-R441TN/-R442BK A/B/C/E/G/J/U

7 Location of P.C. Board Parts and Parts List

■ Main Board

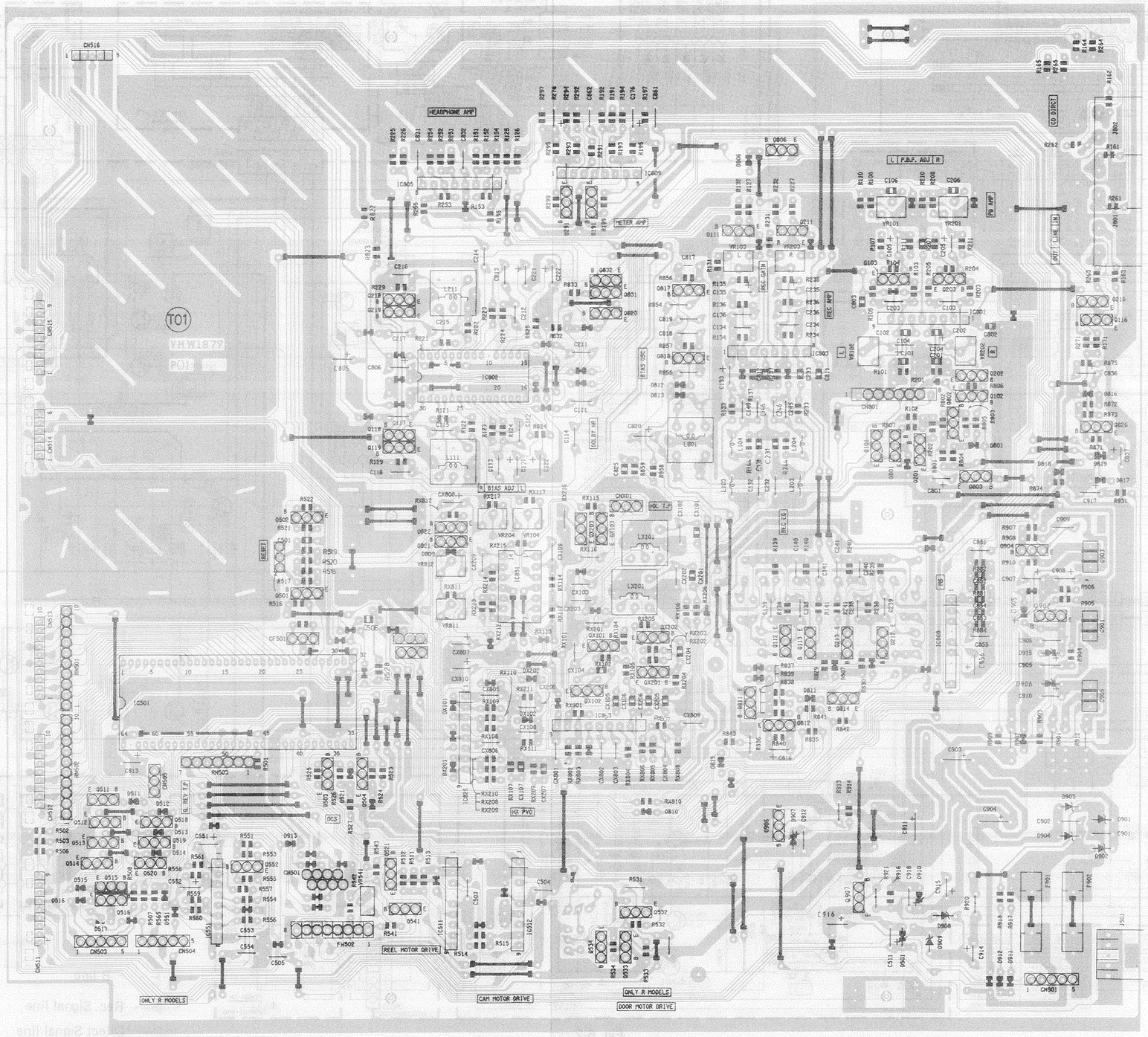


Fig. 7-1

● Main Board Parts List

BLOCK NO. 0 1

⚠	REF.	PARTS NO.	PARTS NAME
	C 101	QCBB1HK-102Y	C CAPACITOR
	C 102	QCBB1HK-151Y	C CAPACITOR
	C 103	QFV41HJ-103	FILM CAPACITOR
	C 104	QETC1AM-107ZN	E CAPACITOR
	C 105	QETC1EM-106ZN	E CAPACITOR
	C 106	QCXB1CM-152Y	C CAPACITOR
	C 107	QCS11HJ-331	C.CAPACITOR
	C 111	QEN41EM-475	NP.E.CAPACITOR
	C 112	QFN41HJ-222	M CAPACITOR
	C 113	QFN41HJ-222	M CAPACITOR
	C 114	QEN41EM-475	NP.E.CAPACITOR
	C 115	QFN41HJ-332	M.CAPACITOR
	C 116	QFN41HJ-152	M CAPACITOR
	C 117	QEN41EM-475	NP.E.CAPACITOR
	C 121	QETC1HM-564ZN	E CAPACITOR
	C 122	QETC1HM-334ZN	E.CAPACITOR
	C 131	QCBB1HK-331Y	C CAPACITOR
	C 132	QCS32HJ-151ZV	C.CAPACITOR
	C 133	QETC1HM-105ZN	E CAPACITOR
	C 134	QCS11HJ-330	C CAPACITOR
	C 135	QETC1HM-224ZN	E CAPACITOR
	C 136	QFN41HJ-472	M CAPACITOR
	C 138	QCC11EM-103	C CAPACITOR
	C 139	QCC31EM-563ZV	C CAPACITOR
	C 140	QCC11EM-103	C CAPACITOR
	C 141	QCC31EM-333ZV	C CAPACITOR
	C 145	QFV71HJ-153ZM	FILM CAPACITOR
	C 146	QCXB1CM-152Y	C CAPACITOR
	C 176	QETC1EM-106ZN	E CAPACITOR
	C 201	QCBB1HK-102Y	C CAPACITOR
	C 202	QCBB1HK-151Y	C CAPACITOR
	C 203	QFV41HJ-103	FILM CAPACITOR
	C 204	QETC1AM-107ZN	E CAPACITOR
	C 205	QETC1EM-106ZN	E CAPACITOR
	C 206	QCXB1CM-152Y	C CAPACITOR
	C 207	QCS11HJ-331	C.CAPACITOR
	C 211	QEN41EM-475	NP.E.CAPACITOR
	C 212	QFN41HJ-222	M CAPACITOR
	C 213	QFN41HJ-222	M CAPACITOR
	C 214	QEN41EM-475	NP.E.CAPACITOR
	C 215	QFN41HJ-332	M.CAPACITOR
	C 216	QFN41HJ-152	M CAPACITOR
	C 217	QEN41EM-475	NP.E.CAPACITOR
	C 221	QETC1HM-564ZN	E CAPACITOR
	C 222	QETC1HM-334ZN	E.CAPACITOR
	C 231	QCBB1HK-331Y	C CAPACITOR
	C 232	QCS32HJ-151ZV	C.CAPACITOR
	C 233	QETC1HM-105ZN	E CAPACITOR
	C 234	QCS11HJ-330	C CAPACITOR
	C 235	QETC1HM-224ZN	E CAPACITOR
	C 236	QFN41HJ-472	M CAPACITOR
	C 238	QCC11EM-103	C CAPACITOR
	C 239	QCC31EM-563ZV	C CAPACITOR
	C 240	QCC11EM-103	C CAPACITOR
	C 241	QCC31EM-333ZV	C CAPACITOR
	C 245	QFV71HJ-153ZM	FILM CAPACITOR
	C 246	QCXB1CM-152Y	C CAPACITOR
	C 276	QETC1EM-106ZN	E CAPACITOR
	C 501	QCBB1HK-331Y	C CAPACITOR
	C 503	QCF11HP-103	C CAPACITOR
	C 504	QCF11HP-103	C CAPACITOR
	C 505	QCF11HP-103	C CAPACITOR
	C 506	QCVB1CM-103Y	C CAPACITOR
	C 511	QETC1AM-107ZN	E CAPACITOR
	C 531	QCF11HP-103	C CAPACITOR
	C 551	QETC1HM-475ZN	E CAPACITOR
	C 552	QETC1AM-477ZN	E CAPACITOR
	C 553	QETC1AM-107ZN	E CAPACITOR
	C 554	QCF11HP-103	C CAPACITOR
	C 801	QETC1AM-477ZN	E CAPACITOR
	C 802	QCVB1CM-103Y	C CAPACITOR
	C 803	QCVB1CM-103Y	C CAPACITOR
	C 805	QETC1AM-477ZN	E CAPACITOR
	C 806	QETC1AM-477ZN	E CAPACITOR
	C 811	QCVB1CM-103Y	C CAPACITOR
	C 812	QCVB1CM-103Y	C CAPACITOR
	C 816	QETC1AM-107ZN	E CAPACITOR
	C 817	QFN41HJ-332	M.CAPACITOR
	C 818	QFN41HJ-332	M.CAPACITOR
	C 819	QFV41HJ-103	FILM CAPACITOR
	C 820	QETC1CM-476ZN	E CAPACITOR
	C 822	QFP82AJ-183	PP CAPACITOR
	C 825	QCBB1HK-471Y	C CAPACITOR
	C 831	QCF11HP-103	C CAPACITOR
	C 832	QCF11HP-103	C CAPACITOR
	C 836	QETC1EM-336ZN	E CAPACITOR
	C 837	QETA1AM-108N	E CAPACITOR
	C 851	QCC11EM-103	C CAPACITOR
	C 852	QCXB1CM-182Y	C.CAPACITOR
	C 853	QCBB1HK-561Y	C CAPACITOR
	C 854	QCXB1CM-272Y	C.CAPACITOR
	C 855	QFV71HJ-394ZM	FILM CAPACITOR
	C 856	QETC1HM-224ZN	E CAPACITOR
	C 861	QCF11HP-103	C CAPACITOR
	C 862	QCF11HP-103	C CAPACITOR
	C 901	QCF11HP-103	C CAPACITOR
	C 902	QCF11HP-103	C CAPACITOR
	C 903	QETB1EM-228N	E.CAPACITOR
	C 904	QETB1EM-228N	E.CAPACITOR
	C 905	QETC1EM-107ZN	E.CAPACITOR
	C 906	QETC1AM-476ZN	E CAPACITOR
	C 907	QETC1EM-107ZN	E.CAPACITOR
	C 908	QETC1AM-227ZN	E CAPACITOR
	C 909	QETC1AM-227ZN	E CAPACITOR
	C 910	QETC1CM-107ZN	E.CAPACITOR
	C 911	QETB1CM-688N	E.CAPACITOR
	C 912	QETC1EM-106ZN	E CAPACITOR
	C 913	QETC1AM-107ZN	E CAPACITOR
	C 914	QETB1EM-337N	E.CAPACITOR
	C 915	QETB1VM-227N	E CAPACITOR
	C 916	QETC1EM-107ZN	E.CAPACITOR
	C 917	QETC1EM-336ZN	E CAPACITOR
	C 918	QETC1AM-107ZN	E CAPACITOR
	CF501	EFO-GC6004T5	CERA LOCK
	CNX01	VMC0040-003Z	CONNECTOR IM
	CN501	VMC0163-008	
	CN503	VMC0166-005Z	CONNECTOR
	CN504	VMC0166-005Z	CONNECTOR
	CN505	VMC0040-003Z	CONNECTOR IM
	CN511	VMC0193-S09	CONNECTOR
	CN512	VMC0193-S09	CONNECTOR
	CN513	VMC0193-S10	CONNECTOR
	CN514	VMC0193-S06	CONNECTOR
	CN515	VMC0193-S09	CONNECTOR
	CN516	VMC0194-P05	CONNECTOR
	CN801	VMC0040-008	CONNECTOR
	CN901	VMC0166-005Z	CONNECTOR
	CX101	QCBB1HK-221Y	C CAPACITOR
	CX102	QCS32HJ-101ZV	C CAPACITOR
	CX103	QCF11HP-103	C CAPACITOR
	CX104	QCBB1HK-101Y	C CAPACITOR
	CX105	QCBB1HK-221Y	C CAPACITOR
	CX106	QCBB1HK-221Y	C CAPACITOR
	CX107	QCBB1HK-271Y	C CAPACITOR
	CX108	QFV41HJ-103	FILM CAPACITOR
	CX109	QFV41HJ-223	FILM CAPACITOR
	CX201	QCBB1HK-221Y	C CAPACITOR
	CX202	QCS32HJ-101ZV	C CAPACITOR
	CX203	QCF11HP-103	C CAPACITOR
	CX204	QCBB1HK-101Y	C CAPACITOR

⚠	REF.	PARTS NO.	PARTS NAME
	CX205	QCBB1HK-221Y	C CAPACITOR
	CX206	QCBB1HK-221Y	C CAPACITOR
	CX207	QCBB1HK-271Y	C CAPACITOR
	CX208	QFV41HJ-103	FILM CAPACITOR
	CX209	QFV41HJ-223	FILM CAPACITOR
	CX801	QCF11HP-103	C CAPACITOR
	CX802	QCF11HP-103	C CAPACITOR
	CX803	QCBB1HK-151Y	C CAPACITOR
	CX804	QCBB1HK-151Y	C CAPACITOR
	CX805	QCF11HP-103	C CAPACITOR
	CX806	QCF11HP-103	C CAPACITOR
	CX807	QETC1EM-106ZN	E CAPACITOR
	CX808	QETC1EM-226ZN	E CAPACITOR
	CX809	QFV41HJ-103	FILM CAPACITOR
	CX810	QETC1CM-107ZN	E.CAPACITOR
	D 501	MTZ6.8C	Z.DIODE
	D 511	1SS133	DIODE
	D 512	1SS133	DIODE
	D 513	1SS133	DIODE
	D 514	1SS133	DIODE
	D 515	1SS133	DIODE
	D 516	1SS133	DIODE
	D 517	1SS133	DIODE
	D 521	1SS133	DIODE
	D 551	1SS133	DIODE
	D 801	1SS133	DIODE
	D 806	1SS292	SI DIODE
	D 807	1SS133	DIODE
	D 809	1SS133	DIODE
	D 810	1SS133	DIODE
	D 811	1SS133	DIODE
	D 812	1SS133	DIODE
	D 813	1SS133	DIODE
	D 815	1SS133	DIODE
	D 816	1SS133	DIODE
	D 817	1SS133	DIODE
	D 818	1SS133	DIODE
	D 819	1SS133	DIODE
	D 901	1SR35-100A	SI DIODE
	D 902	1SR35-100A	SI DIODE
	D 903	1SR35-100A	SI DIODE
	D 904	1SR35-100A	SI DIODE
	D 905	MTZ5.6C	ZENER DIODE
	D 906	MTZ12A	ZENER DIODE
	D 907	MTZ5.6C	ZENER DIODE
	D 908	1SR35-100A	SI DIODE
	D 909	1SR35-100A	SI DIODE
	D 910	MTZ24C	ZENER DIODE
	D 911	1SS133	DIODE
	D 912	1SS133	DIODE
	D 913	1SS133	DIODE
	DX101	1SS133	DIODE
	DX102	1SS133	DIODE
	DX201	1SS133	DIODE
	DX202	1SS133	DIODE
	IC501	MB88514B-1442T	IC
	IC511	TA8409S	IC
	IC512	TA8409S	IC
	IC801	AN6557F	IC
	IC802	CXA1331S	DOLBY IC
	IC803	XRA15218N	IC
	IC805	XRA15218N	IC
	IC808	LA2000S	IC
	IC809	XRA15218N	IC
	IC851	LM324N	IC
	IC852	UPC4570HA	IC
	IC853	UPC4570HA	IC
	J 501	QMS3533-001	JACK
	J 801	EMN00TV-402A	PIN JACK
	J 802	EMN00TV-201A	PIN JACK

⚠	REF.	PARTS NO.	PARTS NAME
	L 103	VQP0001-562ZS	INDUCTOR
	L 104	VQP0001-562ZS	INDUCTOR
	L 111	VQZ0067-001	FILTER
	L 203	VQP0001-562ZS	INDUCTOR
	L 204	VQP0001-562ZS	INDUCTOR
	L 211	VQZ0067-001	FILTER
	L 801	VQH1008-040	OSC COIL(BIAS)
	LX101	VQH1008-045	OSC COIL(BIAS)
	LX201	VQH1008-045	OSC COIL(BIAS)
	Q 101	2SC1845(E,U)	TRANSISTOR
	Q 102	2SC2001(L,K)	TRANSISTOR
	Q 103	2SK301(R,S)	TRANSISTOR
	Q 111	2SC2001(L,K)	TRANSISTOR
	Q 112	DTC124ES	TRANSISTOR
	Q 113	DTC124ES	TRANSISTOR
	Q 116	2SC2001(L,K)	TRANSISTOR
	Q 118	DTC124ES	TRANSISTOR
	Q 119	DTC124ES	TRANSISTOR
	Q 191	2SC945(P,K)	TRANSISTOR
	Q 201	2SC1845(E,U)	TRANSISTOR
	Q 202	2SC2001(L,K)	TRANSISTOR
	Q 203	2SK301(R,S)	TRANSISTOR
	Q 211	2SC2001(L,K)	TRANSISTOR
	Q 212	DTC124ES	TRANSISTOR
	Q 213	DTC124ES	TRANSISTOR
	Q 216	2SC2001(L,K)	TRANSISTOR
	Q 218	DTC124ES	TRANSISTOR
	Q 219	DTC124ES	TRANSISTOR
	Q 291	2SC945(P,K)	TRANSISTOR
	Q 501	2SC945(P,K)	TRANSISTOR
	Q 502	2SC945(P,K)	TRANSISTOR
	Q 503	2SC945(P,K)	TRANSISTOR
	Q 504	2SA564(R,S)	TRANSISTOR
	Q 511	DTC124ES	TRANSISTOR
	Q 512	DTC124ES	TRANSISTOR
	Q 513	DTC124ES	TRANSISTOR
	Q 514	DTC124ES	TRANSISTOR
	Q 515	2SC945(P,K)	TRANSISTOR
	Q 516	DTC124ES	TRANSISTOR
	Q 518	DTC124ES	TRANSISTOR
	Q 519	DTC124ES	TRANSISTOR
	Q 520	DTC124ES	TRANSISTOR
	Q 521	DTC124ES	TRANSISTOR
	Q 532	2SC2001(L,K)	TRANSISTOR
	Q 533	2SA952(L,K)	TRANSISTOR
	Q 534	DTC124ES	TRANSISTOR
	Q 541	2SA564(R,S)	TRANSISTOR
	Q 542	AN1F4M	TRANSISTOR
	Q 543	AA1F4M	TRANSISTOR
	Q 552	2SC945(P,K)	TRANSISTOR
	Q 801	2SC1845(E,U)	TRANSISTOR
	Q 802	2SA921(S,T)	TRANSISTOR I M
	Q 803	DTC124ES	TRANSISTOR
	Q 806	DTA124ES	TRANSISTOR
	Q 811	2SC2001(L,K)	TRANSISTOR
	Q 812	2SA564(R,S)	TRANSISTOR
	Q 814	DTC124ES	TRANSISTOR
	Q 817	2SC2001(L,K)	TRANSISTOR
	Q 818	2SC2001(L,K)	TRANSISTOR
	Q 820	DTA124ES	TRANSISTOR
	Q 821	DTC124ES	TRANSISTOR
	Q 822	DTC124ES	TRANSISTOR
	Q 826	2SA564(R,S)	TRANSISTOR
	Q 831	DTC124ES	TRANSISTOR
	Q 832	DTC124ES	TRANSISTOR
	Q 901	2SD882(Q,P)	TRANSISTOR
	Q 902	2SC945(P,K)	TRANSISTOR
	Q 903	2SB772(Q,P)	TRANSISTOR
	Q 904	2SA564(R,S)	TRANSISTOR
	Q 905	2SD882(Q,P)	TRANSISTOR

⚠	REF.	PARTS NO.	PARTS NAME
	Q 906	2SC2001(L,K)	TRANSISTOR
	Q 907	2SA1020(O,Y)	TRANSISTOR
	QX101	2SC2001(L,K)	TRANSISTOR
	QX102	2SC2001(L,K)	TRANSISTOR
	QX103	2SC2001(L,K)	TRANSISTOR
	QX201	2SC2001(L,K)	TRANSISTOR
	QX202	2SC2001(L,K)	TRANSISTOR
	QX203	2SC2001(L,K)	TRANSISTOR
	R 101	QRD161J-683	CARBON RESISTOR
	R 102	QRD161J-332	CARBON RESISTOR
	R 103	QRD161J-394	CARBON RESISTOR
	R 104	QRD161J-512	CARBON RESISTOR
	R 105	QRD161J-682	CARBON RESISTOR
	R 107	QRD161J-105	CARBON RESISTOR
	R 108	QRD161J-223	CARBON RESISTOR
	R 110	QRD161J-223	CARBON RESISTOR
	R 111	QRD161J-332	CARBON RESISTOR
	R 121	QRD161J-222	CARBON RESISTOR
	R 122	QRD161J-562	CARBON RESISTOR
	R 123	QRD161J-243	CARBON RESISTOR
	R 124	QRD161J-561	CARBON RESISTOR
	R 125	QRD161J-123	CARBON RESISTOR
	R 126	QRD161J-332	CARBON RESISTOR
	R 127	QRD161J-183	CARBON RESISTOR
	R 129	QRD161J-105	CARBON RESISTOR
	R 131	QRD161J-472	CARBON RESISTOR
	R 132	QRD161J-222	CARBON RESISTOR
	R 133	QRD161J-123	CARBON RESISTOR
	R 134	QRD161J-153	CARBON RESISTOR
	R 135	QRD161J-153	CARBON RESISTOR
	R 136	QRD161J-183	CARBON RESISTOR
	R 137	QRD161J-152	CARBON RESISTOR
	R 138	QRD161J-272	CARBON RESISTOR
	R 139	QRD161J-152	CARBON RESISTOR
	R 140	QRD161J-472	CARBON RESISTOR
	R 141	QRD161J-222	CARBON RESISTOR
	R 144	QRD161J-331	CARBON RESISTOE
	R 151	QRD161J-223	CARBON RESISTOR
	R 152	QRD161J-472	CARBON RESISTOR
	R 153	QRD161J-184	CARBON RESISTOR
	R 154	QRD161J-103	CARBON RESISTOR
	R 155	QRD161J-151	CARBON RESISTOR
	R 161	QRD161J-333	CARBON RESISTOR
	R 162	QRD161J-333	CARBON RESISTOR
	R 163	QRD161J-222	CARBON RESISTOR
	R 164	QRD161J-104	CARBON RESISTOR
	R 165	QRD161J-473	CARBON RESISTOR
	R 171	QRD161J-222	CARBON RESISTOR
	R 191	QRD161J-223	CARBON RESISTOR
	R 192	QRD161J-472	CARBON RESISTOR
	R 193	QRD161J-163Y	C RESISTOR
	R 194	QRD161J-102	CARBON RESISTOR
	R 195	QRD161J-560	CARBON RESISTOR
	R 197	QRD161J-124	CARBON RESISTOR
	R 199	QRD161J-472	CARBON RESISTOR
	R 201	QRD161J-683	CARBON RESISTOR
	R 202	QRD161J-332	CARBON RESISTOR
	R 203	QRD161J-394	CARBON RESISTOR
	R 204	QRD161J-512	CARBON RESISTOR
	R 205	QRD161J-682	CARBON RESISTOR
	R 207	QRD161J-105	CARBON RESISTOR
	R 208	QRD161J-223	CARBON RESISTOR
	R 210	QRD161J-223	CARBON RESISTOR
	R 211	QRD161J-332	CARBON RESISTOR
	R 221	QRD161J-222	CARBON RESISTOR
	R 222	QRD161J-562	CARBON RESISTOR
	R 223	QRD161J-243	CARBON RESISTOR
	R 224	QRD161J-561	CARBON RESISTOR
	R 225	QRD161J-123	CARBON RESISTOR
	R 226	QRD161J-332	CARBON RESISTOR

⚠	REF.	PARTS NO.	PARTS NAME
	R 227	QRD161J-183	CARBON RESISTOR
	R 229	QRD161J-105	CARBON RESISTOR
	R 231	QRD161J-472	CARBON RESISTOR
	R 232	QRD161J-222	CARBON RESISTOR
	R 233	QRD161J-123	CARBON RESISTOR
	R 234	QRD161J-153	CARBON RESISTOR
	R 235	QRD161J-153	CARBON RESISTOR
	R 236	QRD161J-183	CARBON RESISTOR
	R 237	QRD161J-152	CARBON RESISTOR
	R 238	QRD161J-272	CARBON RESISTOR
	R 239	QRD161J-152	CARBON RESISTOR
	R 240	QRD161J-472	CARBON RESISTOR
	R 241	QRD161J-222	CARBON RESISTOR
	R 244	QRD161J-331	CARBON RESISTOE
	R 251	QRD161J-223	CARBON RESISTOR
	R 252	QRD161J-472	CARBON RESISTOR
	R 253	QRD161J-184	CARBON RESISTOR
	R 254	QRD161J-103	CARBON RESISTOR
	R 255	QRD161J-151	CARBON RESISTOR
	R 261	QRD161J-333	CARBON RESISTOR
	R 262	QRD161J-333	CARBON RESISTOR
	R 263	QRD161J-222	CARBON RESISTOR
	R 264	QRD161J-104	CARBON RESISTOR
	R 265	QRD161J-473	CARBON RESISTOR
	R 271	QRD161J-222	CARBON RESISTOR
	R 291	QRD161J-223	CARBON RESISTOR
	R 292	QRD161J-472	CARBON RESISTOR
	R 293	QRD161J-163Y	C RESISTOR
	R 294	QRD161J-102	CARBON RESISTOR
	R 295	QRD161J-560	CARBON RESISTOR
	R 297	QRD161J-124	CARBON RESISTOR
	R 299	QRD161J-472	CARBON RESISTOR
	R 501	QRD161J-121	CARBON RESISTOR
	R 502	QRD161J-223	CARBON RESISTOR
	R 503	QRD161J-223	CARBON RESISTOR
	R 504	QRD161J-153	CARBON RESISTOR
	R 506	QRD161J-223	CARBON RESISTOR
	R 507	QRD161J-101	CARBON RESISTOR
	R 508	QRD161J-101	CARBON RESISTOR
	R 511	QRD161J-272	CARBON RESISTOR
	R 512	QRD161J-471	CARBON RESISTOR
	R 513	QRD161J-102	CARBON RESISTOR
	R 514	QRD161J-223	CARBON RESISTOR
	R 515	QRD161J-123	CARBON RESISTOR
	R 516	QRD161J-471	CARBON RESISTOR
	R 517	QRD161J-103	CARBON RESISTOR
	R 518	QRD161J-102	CARBON RESISTOR
	R 519	QRD161J-272	CARBON RESISTOR
	R 520	QRD161J-102	CARBON RESISTOR
	R 521	QRD161J-102	CARBON RESISTOR
	R 522	QRD161J-471	CARBON RESISTOR
	R 523	QRD161J-223	CARBON RESISTOR
	R 524	QRD161J-103	CARBON RESISTOR
	R 525	QRD161J-223	CARBON RESISTOR
	R 526	QRD161J-473	CARBON RESISTOR
	R 527	QRD161J-221	CARBON RESISTOR
	R 528	QRD161J-102	CARBON RESISTOR
	R 531	QRD14CJ-100SX	CARBON RESISTOR
	R 532	QRD161J-122	CARBON RESISTOR
	R 533	QRD161J-682	CARBON RESISTOR
	R 534	QRD161J-101	CARBON RESISTOR
	R 541	QRD161J-103	CARBON RESISTOR
	R 542	QRD161J-224	CARBON RESISTOR
	R 543	QRD161J-184	CARBON RESISTOR
	R 551	QRD161J-104	CARBON RESISTOR
	R 553	QRD161J-151	CARBON RESISTOR
	R 554	QRD161J-152	CARBON RESISTOR
	R 555	QRD161J-103	CARBON RESISTOR
	R 556	QRD161J-155	CARBON RESISTOR
	R 557	QRD161J-103	CARBON RESISTOR

⚠	REF.	PARTS NO.	PARTS NAME
	R 558	QRD161J-104	CARBON RESISTOR
	R 559	QRD161J-104	CARBON RESISTOR
	R 560	QRD161J-102	CARBON RESISTOR
	R 561	QRD161J-104	CARBON RESISTOR
	R 562	QRZ0052-100	C RESISTOR
	R 565	QRD161J-471	CARBON RESISTOR
	R 801	QRD161J-471	CARBON RESISTOR
	R 802	QRD161J-332	CARBON RESISTOR
	R 803	QRD161J-472	CARBON RESISTOR
	R 804	QRD161J-182	CARBON RESISTOR
	R 805	QRD161J-272	CARBON RESISTOR
	R 806	QRD161J-182	CARBON RESISTOR
	R 807	QRD161J-471	CARBON RESISTOR
	R 822	QRD161J-100	CARBON RESISTOR
	R 823	QRD161J-100	CARBON RESISTOR
	R 824	QRD161J-102	CARBON RESISTOR
	R 825	QRD161J-273	CARBON RESISTOR
	R 829	QRD161J-223	CARBON RESISTOR
	R 830	QRD161J-223	CARBON RESISTOR
	R 832	QRD161J-473	CARBON RESISTOR
	R 833	QRD161J-223	CARBON RESISTOR
	R 835	QRD161J-223	CARBON RESISTOR
	R 836	QRZ0077-100X	F.RESISTOR
	R 837	QRD161J-222	CARBON RESISTOR
	R 838	QRD161J-102	CARBON RESISTOR
	R 839	QRD161J-103	CARBON RESISTOR
	R 840	QRD161J-471	CARBON RESISTOR
	R 841	QRD161J-272	CARBON RESISTOR
	R 842	QRD161J-752Y	CARBON RESISTOR
	R 843	QRD161J-222	CARBON RESISTOR
	R 854	QRD14CJ-2R2SX	C RESISTOR
	R 855	QRD14CJ-2R2SX	C RESISTOR
	R 856	QRD161J-473	CARBON RESISTOR
	R 857	QRD161J-473	CARBON RESISTOR
	R 858	QRD161J-472	CARBON RESISTOR
	R 859	QRD161J-472	CARBON RESISTOR
	R 871	QRD161J-223	CARBON RESISTOR
	R 872	QRD161J-223	CARBON RESISTOR
	R 873	QRD161J-223	CARBON RESISTOR
	R 874	QRD161J-223	CARBON RESISTOR
	R 875	QRD161J-101	CARBON RESISTOR
	R 881	QRD161J-683	CARBON RESISTOR
	R 882	QRD161J-683	CARBON RESISTOR
	R 884	QRD161J-224	CARBON RESISTOR
	R 901	QRZ0077-4R7X	F. RESISTOR
	R 902	QRZ0077-4R7X	F. RESISTOR
	R 903	QRD161J-471	CARBON RESISTOR
	R 904	QRD161J-471	CARBON RESISTOR
	R 905	QRD161J-821	CARBON RESISTOR
	R 906	QRD161J-103	CARBON RESISTOR
	R 907	QRD161J-332	CARBON RESISTOR
	R 908	QRD161J-272	CARBON RESISTOR
	R 909	QRD161J-471	CARBON RESISTOR
	R 910	QRD161J-471	CARBON RESISTOR
	R 912	QRD121J-331	C RESISTOR
	R 913	QRZ0077-4R7X	F. RESISTOR
	R 914	QRD161J-471	CARBON RESISTOR
	R 915	QRD161J-471	CARBON RESISTOR
	R 916	QRD14CJ-821SX	C RESISTOR
	R 917	QRD161J-103	CARBON RESISTOR
	R 918	QRD161J-103	CARBON RESISTOR
	R 920	QRD14CJ-4R7SX	CARBON RESISTOR
	R 921	QRZ0077-4R7X	F. RESISTOR
	R 931	QRD161J-102	CARBON RESISTOR
	RN501	QRB095J-223	R NETWORK
	RN502	QRB095J-223	R NETWORK
	RN503	QRB065J-682	R NETWORK
	RX101	QRD14CJ-100SX	CARBON RESISTOR
	RX102	QRD161J-823	CARBON RESISTOR
	RX103	QRD143J-823S	CARBON RESISTOR

⚠	REF.	PARTS NO.	PARTS NAME
	RX104	QRD161J-101	CARBON RESISTOR
	RX105	QRD161J-101	CARBON RESISTOR
	RX106	QRD161J-334	CARBON RESISTOR
	RX107	QRD161J-563	CARBON RESISTOR
	RX108	QRD161J-103	CARBON RESISTOR
	RX109	QRD161J-102	CARBON RESISTOR
	RX110	QRD161J-103	CARBON RESISTOR
	RX111	QRD161J-104	CARBON RESISTOR
	RX112	QRD161J-103	CARBON RESISTOR
	RX113	QRD161J-103	CARBON RESISTOR
	RX114	QRD161J-103	CARBON RESISTOR
	RX115	QRD161J-102	CARBON RESISTOR
	RX116	QRD14CJ-4R7SX	CARBON RESISTOR
	RX117	QRD161J-563	CARBON RESISTOR
	RX201	QRD14CJ-100SX	CARBON RESISTOR
	RX202	QRD161J-823	CARBON RESISTOR
	RX203	QRD161J-823	CARBON RESISTOR
	RX204	QRD161J-101	CARBON RESISTOR
	RX205	QRD161J-101	CARBON RESISTOR
	RX206	QRD161J-334	CARBON RESISTOR
	RX207	QRD161J-563	CARBON RESISTOR
	RX208	QRD161J-103	CARBON RESISTOR
	RX209	QRD161J-102	CARBON RESISTOR
	RX210	QRD161J-103	CARBON RESISTOR
	RX211	QRD161J-104	CARBON RESISTOR
	RX212	QRD161J-103	CARBON RESISTOR
	RX213	QRD161J-103	CARBON RESISTOR
	RX214	QRD161J-103	CARBON RESISTOR
	RX215	QRD161J-102	CARBON RESISTOR
	RX216	QRD14CJ-4R7SX	CARBON RESISTOR
	RX217	QRD161J-563	CARBON RESISTOR
	RX801	QRD161J-223	CARBON RESISTOR
	RX802	QRD161J-223	CARBON RESISTOR
	RX803	QRD161J-103	CARBON RESISTOR
	RX804	QRD161J-103	CARBON RESISTOR
	RX805	QRD161J-103	CARBON RESISTOR
	RX806	QRD161J-562	CARBON RESISTOR
	RX807	QRD161J-392	CARBON RESISTOR
	RX808	QRD161J-104	CARBON RESISTOR
	RX810	QRD161J-433Y	CARBON RESISTOR
	RX811	QRD161J-563	CARBON RESISTOR
	RX812	QRD161J-472	CARBON RESISTOR
	VR101	QVZ3523-203AZ	V RESISTOR
	VR102	QVZ3523-201AZ	V RESISTOR
	VR103	QVZ3523-103AZ	V RESISTOR
	VR104	QVZ3523-502AZ	V.RESISTOR
	VR201	QVZ3523-203AZ	V RESISTOR
	VR202	QVZ3523-201AZ	V RESISTOR
	VR203	QVZ3523-103AZ	V RESISTOR
	VR204	QVZ3523-502AZ	V.RESISTOR
	VR541	QVPE612-103ZM	V RESISTOR
	VR811	QVZ3523-502AZ	V.RESISTOR
	VR812	QVZ3523-502AZ	V.RESISTOR

Other Board

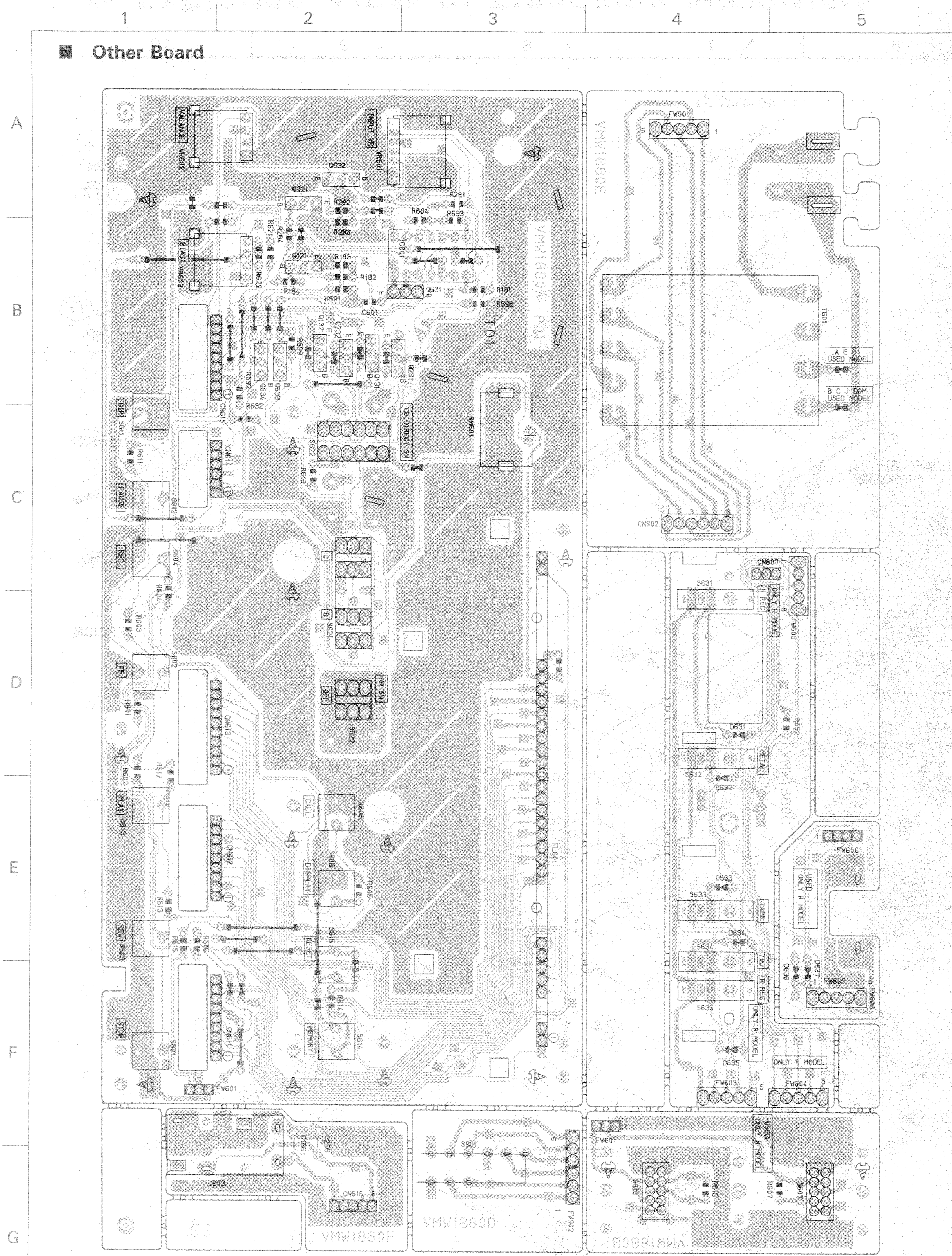
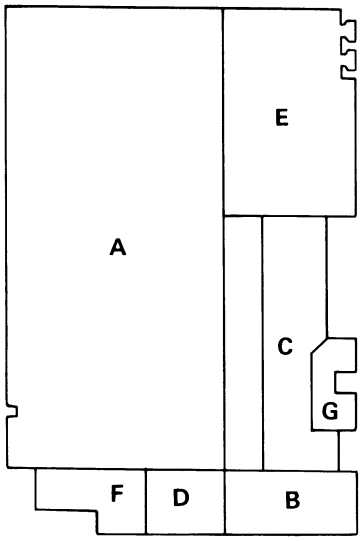


Fig. 7-2



A : LF board
B : Timmer/Reverse mode switch board
C : Leaf switch board
D : Power switch board
E : Power supply board
F : Headphone board
G : Door motor board

● Other Board Parts List

BLOCK NO. 02

⚠	REF.	PARTS NO.	PARTS NAME
	C 156	QCF11HP-103	C CAPACITOR
	C 256	QCF11HP-103	C CAPACITOR
	C 601	QCVB1CM-103Y	C CAPACITOR
	CN607	VMC0075-R03N	CONNECTOR
	CN611	VMC0193-P09	CONNECTOR
	CN612	VMC0193-P09	CONNECTOR
	CN613	VMC0193-P10	CONNECTOR
	CN614	VMC0193-P06	CONNECTOR
	CN615	VMC0193-P09	CONNECTOR
	CN616	VMC0194-S05	CONNECTOR
	CN902	VMC0166-003Z	CONNECTOR
	CN903	VMC0166-003Z	CONNECTOR
	D 631	1SS133	DIODE
	D 632	1SS133	DIODE
	D 633	1SS133	DIODE
	D 634	1SS133	DIODE
	D 635	1SS133	DIODE
	D 636	1SS133	DIODE
	D 637	1SS133	DIODE
	FL601	FIP98AW5Y	FL TUBE
	FW901	VWS105-15B34K	EF FLAT WIRE
	FW902	VWS106-24B34K	FLAT WIRE
	IC601	XRU4066B	IC
	J 803	QMS6022-V01	JACK
	Q 121	2SC945(P,K)	TRANSISTOR
	Q 131	2SC945(P,K)	TRANSISTOR
	Q 132	2SC945(P,K)	TRANSISTOR
	Q 221	2SC945(P,K)	TRANSISTOR
	Q 231	2SC945(P,K)	TRANSISTOR
	Q 232	2SC945(P,K)	TRANSISTOR
	Q 631	DTC124ES	TRANSISTOR
	Q 632	2SC945(P,K)	TRANSISTOR
	Q 633	DTA124ES	TRANSISTOR
	Q 634	DTA124ES	TRANSISTOR
	R 181	QRD161J-104	CARBON RESISTOR
	R 182	QRD161J-823	CARBON RESISTOR
	R 183	QRD161J-124	CARBON RESISTOR
	R 184	QRD161J-332	CARBON RESISTOR
	R 281	QRD161J-104	CARBON RESISTOR
	R 282	QRD161J-823	CARBON RESISTOR
	R 283	QRD161J-124	CARBON RESISTOR
	R 284	QRD161J-332	CARBON RESISTOR
	R 552	QRD161J-391	CARBON RESISTOR
	R 601	QRD161J-102	CARBON RESISTOR
	R 602	QRD161J-122	CARBON RESISTOR
	R 603	QRD161J-182	CARBON RESISTOR
	R 604	QRD161J-272	CARBON RESISTOR
	R 605	QRD161J-472	CARBON RESISTOR
	R 606	QRD161J-822	CARBON RESISTOR
	R 607	QRD161J-273	CARBON RESISTOR
	R 611	QRD161J-102	CARBON RESISTOR
	R 612	QRD161J-122	CARBON RESISTOR
	R 613	QRD161J-472	CARBON RESISTOR
	R 614	QRD161J-472	CARBON RESISTOR
	R 615	QRD161J-822	CARBON RESISTOR
	R 616	QRD161J-273	CARBON RESISTOR
	R 621	QRD161J-563	CARBON RESISTOR
	R 622	QRD161J-103	CARBON RESISTOR
	R 631	QRD161J-223	CARBON RESISTOR
	R 632	QRD161J-223	CARBON RESISTOR
	R 691	QRD161J-223	CARBON RESISTOR
	R 692	QRD161J-103	CARBON RESISTOR
	R 693	QRD161J-223	CARBON RESISTOR
	R 694	QRD161J-103	CARBON RESISTOR
	R 695	QRD161J-103	C RESISTOR
	R 697	QRD161J-223	CARBON RESISTOR
	R 698	QRD161J-561	CARBON RESISTOR
	R 699	QRD161J-151	CARBON RESISTOR
	S 601	QSQ4H11-V01Z	TACT SWITCH
	S 602	QSQ4H11-V01Z	TACT SWITCH
	S 603	QSQ4H11-V01Z	TACT SWITCH
	S 604	QSQ4H11-V01Z	TACT SWITCH
	S 605	QSQ4H11-V01Z	TACT SWITCH
	S 606	QSQ4H11-V01Z	TACT SWITCH
	S 607	QSS7A23-V05	SLIDE SWITCH
	S 611	QSQ4H11-V01Z	TACT SWITCH
	S 612	QSQ4H11-V01Z	TACT SWITCH
	S 613	QSQ4H11-V01Z	TACT SWITCH
	S 614	QSQ4H11-V01Z	TACT SWITCH
	S 615	QSQ4H11-V01Z	TACT SWITCH
	S 616	QSS7A23-V05	SLIDE SWITCH
	S 621	QST4013-V01M	PUSH SW
	S 622	QST4011-V01M	PUSH SW
	S 631	VSH1140-003	LEAF SWITCH
	S 632	VSH1140-003	LEAF SWITCH
	S 633	VSH1140-003	LEAF SWITCH
	S 634	VSH1140-003	LEAF SWITCH
	S 635	VSH1140-003	LEAF SWITCH
	S 901	QST8101-V08	PUSH SW
	VR601	QVDB27A-V02	V.RESISTOR
	VR602	QVGA12W-V02	V RESISTOR
	VR603	QVGA12B-V03	V RESISTOR

8 Exploded View of Enclosure Assembly

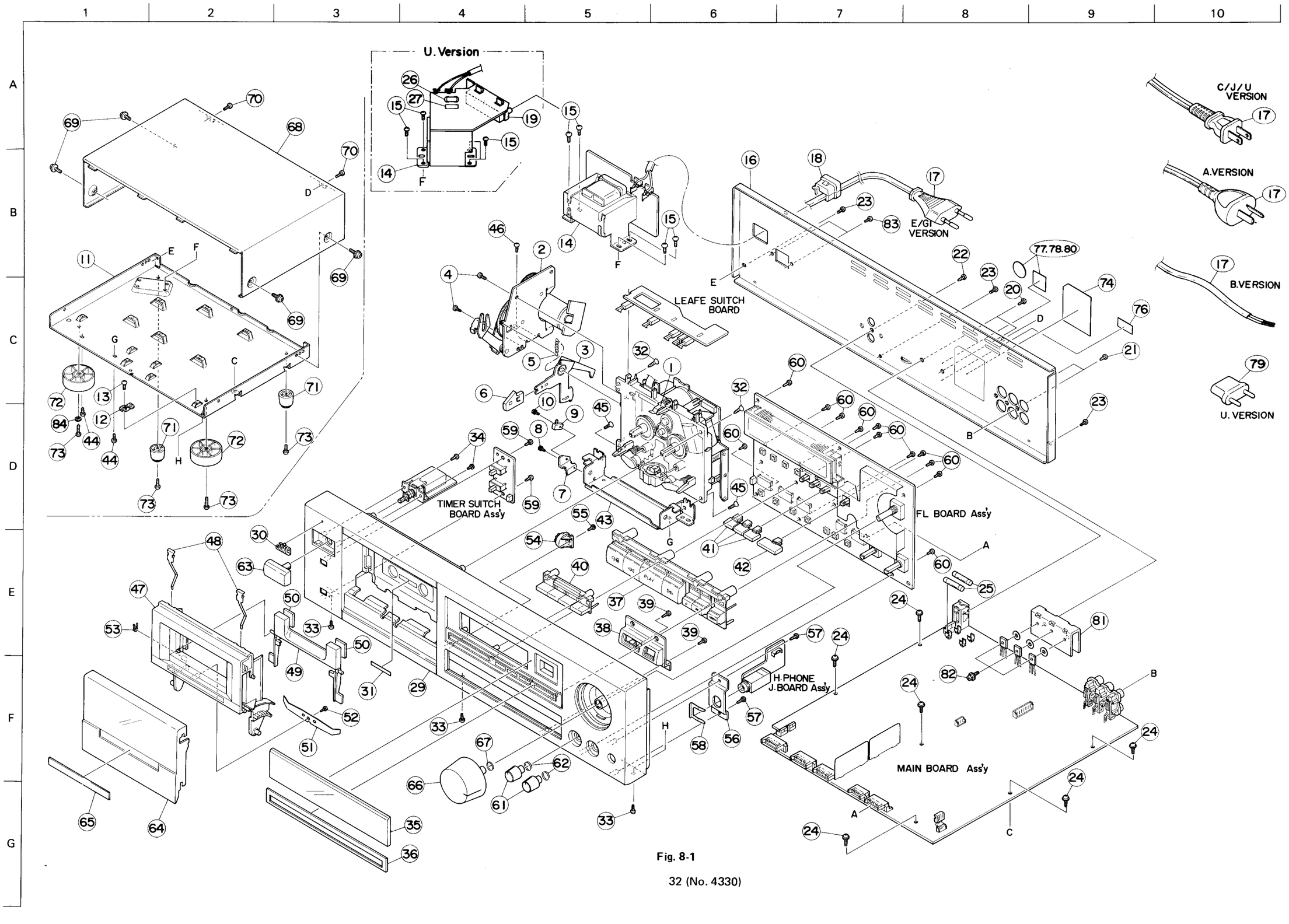


Fig. 8-1

⚠ Parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

● Enclosure Parts List

BLOCK NO. M1MM

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	29, 30,	**ZCTDR441J-FTN**	**Front Panel Ass'y**	**C/J version**	**1**
	31, 35,	**ZCTDR441K-FTN**	**"**	**B/E/G version**	**1**
	36	**ZCTDR442J-FBK**	**"**	**C/J version**	**1**
		ZCTDR442K-FBK	**"**	**B/E/G version**	**1**
	47–53	**ZCTDR441K-CH**	**Cassette Holder Ass'y**		**1**
		ZCTDR	**"**		**1**
	64, 65	**ZCTDR441K-CLTN**	**Cassette LID Ass'y**		**1**
		ZCTDR442K-CLBK	**"**		**1**
	1	VKY4628-002	PACK SPRING		1
	2	VKL2601-00A	P.EJECT ASS'Y		1
	3	VKL7048-001	LOCK LEVER		1
	4	SDST2605Z	SCREW		2
	5	VKW3002-268	SPRING		1
	6	VYH7424-001	LOCK PLATE		1
	7	VKL7075-001	SW BRACKET		1
	8	LPSP2004Z	SCREW		1
	9	VSH1142-001	SWITCH		1
	10	LPSP2006Z	SCREW		1
	11	VKL1333-002	CHASSIS BASE		1
	12	VKL7023-001	PWB BRACKET		1
	13	SBST3006Z	SCREW		1
⚠	14	VTP52A5-011F	POWER TRANS	C/J VERSION	1
⚠		VTP52G5-011F	POWER TRANS	U VERSION	1
⚠		VTP52Z5-011F	POWER TRANS	A/E/G VERSION	1
⚠		VTP52Z5-011FBS	POWER TRANS	B VERSION	1
	15	SBST3006Z	SCREW	FOR POWER TRANS	4
	16	VJC2410-009	REAR PANEL	FOR U VERSION	1
		VJC2410-018	REAR PANEL		1
⚠	17	QMP1200-200	POWER CORD	FOR C/J VERSION	1
⚠		QMP2560-200	POWER CORD	FOR A VERSION	1
⚠		QMP3900-200	POWER CORD	FOR E/G VERSION	1
⚠		QMP7380-200	POWER CORD	FOR U VERSION	1
⚠		QMP9017-008BS	POWER CORD	FOR B VERSION	1
⚠	18	QHS3771-108	CORD STOPPER		1
⚠		QHS3771-108BS	CORD STOPPER	FOR B VERSION	1
		VKS5011-001	VOLTAGE CONTACT		1
	20	SBSF3008M	SCREW	FOR HEAT SINK	2
	21	SBSF3008M	SCREW	FOR PIN JACK	2
	22	SBSF3008M	SCREW	FOR DCS JACK	1
	23	SBST3006M	SCREW	FOR REAR+CHASSIS	3
	24	GBST3006Z	SCREW	FOR MAIN P.C.BOAR	6
⚠	25	QMF51A2-R80	FUSE	A/E/G/U(F901.F902	2
⚠		QMF51E2-R80BS	FUSE	B(F901,F902)	2
⚠	26	QMF51A2-R20	FUSE	U(F903)	1
	27	VND4003-032	FUSE LABEL	FOR U VERSION	1
	29	VJC1991-002	FRONT PANEL		1
		VJC1991-003UL	FRONT PANEL	C/J VERSION ONLY	1
	30	PQ42376-001	JVC MARK		1
	31	VJD4024-001	REFLECTION PLAT		1
	32	SSSF3012Z	SCREW	FOR MECHANISM	2
	33	SBST3006M	SCREW	FOR FRONT PANEL	3
	34	SBSF3010Z	SCREW	FOR POWER SWITCH	2
	35	VJK3544-002	FINDER	FOR FINDER	1

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	36	VJD5350-003	BUTTON PLATE		1
	37	VXP3429-002	MECHA BUTTON		1
	38	VJD5351-002	BUTTON COVER		1
	39	SBSF2610Z	SCREW	FOR BUTTON COVER	2
	40	VXP5048-002	PUSH BUTTON		1
	41	VXP5037-002	PUSH BUTTON	FOR DOLBY NR	3
	42	VXP5038-002	PUSH BUTTON	FOR CD DIRECT	1
	43	VKM3498-001	MECHA BRACKET		1
	44	SBST3006M	SCREW	M.BRACKET+C.BASE	2
	45	SSST3010Z	SCREW	FOR MECHA. BUTTON	2
	46	SBST3006Z	SCREW		1
	47	VJT2269-001	CASSETTE HOLDER		1
	48	VKY4180-001	CASSETTE SPRING		2
	49	VJD3867-001	C.STABILIZER		1
	50	VYTS491-001	PAD		2
	51	VKY4635-002	SPRING PLATE		1
	52	SBSF2608Z	SCREW		1
	53	VKZ4643-002	PROTECT SPRING		1
	54	E305654-004	DAMPER ASS'Y		1
	55	SBSF3010Z	SCREW	FOR DAMPER	1
	56	VKL7022-002	JACK BRACKET	FOR HEAD PHONE JA	1
	57	SBSF2610Z	SCREW	FOR JAC BRACKET	2
	58	VKL6752-001	SNAP PLATE	FOR HEAD PHONE	1
	59	SBSF2610Z	SCREW	FOR TIMER BOARD	2
	60	SBSF2610Z	SCREW	FL BOARD	12
	61	VXL4166-008	KNOB	FOR BALANCE&BIAS	2
	62	VKW4995-001	KNOB SPRING		2
	63	VXP5032-001	PUSH BUTTON	FOR POWER	1
	64	VJT2270-002	CASSETTE LID		1
	65	VJD5385-001	LID PLATE		1
	66	VXL3012-005	INPUT KNOB	B/E/G VERSION	1
		VXL4379-002	INPUT KNOB	A/C/J/U VERSION	1
	67	VKW4901-001	KNOB SPRING	FOR INPUT VOLUME	1
	68	VJC1964-001	TOP COVER		1
	69	VKZ4614-001	SPECIAL SCREW	FOR TOP COVER	4
	70	SBST3006M	SCREW	FOR TOP COVER	2
	71	E47227-036	FOOT		2
	72	VJF4039-00C	FOOT ASS'Y		2
	73	SBST3008Z	SCREW	FOR FOOT	4
	74	VYN2289-002PA	NAME PLATE	B VERSION	1
		VYN2289-003PA	NAME PLATE	A VERSION	1
		VYN2289-004PA	NAME PLATE	C VERSION	1
		VYN2289-005PA	NAME PLATE	E VERSION	1
		VYN2289-006PA	NAME PLATE	J VERSION	1
		VYN2289-007PA	NAME PLATE	U VERSION	1
		VYN2289-008PA	NAME PLATE	G VERSION	1
	76	VND4205-004	CAUTION LABEL	B VERSION	1
	77	QZL1007-001	BEAB LABEL	B VERSION	1
	78	T44362-001	CSA LABEL	C VERSION	1
	79	V04062-001	CONTI.PLUG	U VERSION	1
	80	VND4037-002	F MARK	G VERSION	1
	81	VMH4011-002	HEAT SINK		1
	82	DPSP3008Z	SCREW		3
	83	SDSF3006M	SCREW	U VERSION	2
	84	Q03091-138	WASHER	#1 ~ #3000	1

■ Comparison Table

Enclosure parts comparison table between TD-R441TN and TD-R442BK
(TN: Titanum color, BK: Black)

BLOCK NO. M 2 M M

REF. NO.	PARTS NAME	TD-R441TN	TD-R442BK	REMARKS
16	Rear Panel	VJC2410-018	VJC2410-007	
16	Rear Panel	VJC2410-009	VJC2410-010	U Version
29	Front Panel	VJC1991-002	VJC1991-008	
29	Front Panel	VJC1991-003UL	VJC1991-009UL	C/J Version
35	Finder	VJK3544-002	VJK3544-003	
36	Button Plate	VJD5350-003	VJD5350-005	
37	Mecha. Button	VXP3429-002	VXP3429-005	
38	Button Cover	VJD5351-002	VJD5351-001	
40	Push Button	VXP5048-002	VXP5048-001	
41	Push Button	VXP5037-002	VXP5037-001	
42	Push Button	VXP5038-002	VXP5038-001	
61	Knob	VXL4166-008	VXL4166-003	
63	Push Button	VXP5032-001	VXP5032-002	
64	Cassette Lid	VJT2270-002	VJT2270-005	
66	Input Knob	VXL4379-002	VXL4379-003	A/C/J/U Version
66	Input Knob	VXL3012-005	VXL3012-006	B/E/G Version
68	Top Cover	VJC1964-001	VJC1964-002	
72	Foot	VJF4039-00C	VJF4039-00D	
74	Name Plate	VYN2289-003PA	VYN2297-003PA	A Version
74	Name Plate	VYN2289-002PA	VYN2297-002PA	B Version
74	Name Plate	VYN2289-004PA	VYN2297-004PA	C Version
74	Name Plate	VYN2289-005PA	VYN2297-005PA	E Version
74	Name Plate	VYN2289-008PA	VYN2297-008PA	G Version
74	Name Plate	VYN2289-006PA	VYN2297-006PA	J Version
74	Name Plate	VYN2289-007PA	VYN2297-007PA	U Version
	FRONT PANEL ASSY	ZCTDR441J-FTN	ZCTDR442J-FBK	C/J Version
		ZCTDR441K-FTN	ZCTDR442K-FBK	B/E/G Version
	CASS. HOLDER ASSY	ZCTDR441K-CH	←	
	CASS. LID ASSY	ZCTDR441K-CLTN	ZCTDR442K-CLBK	

9 Exploded View of Mechanism Assembly

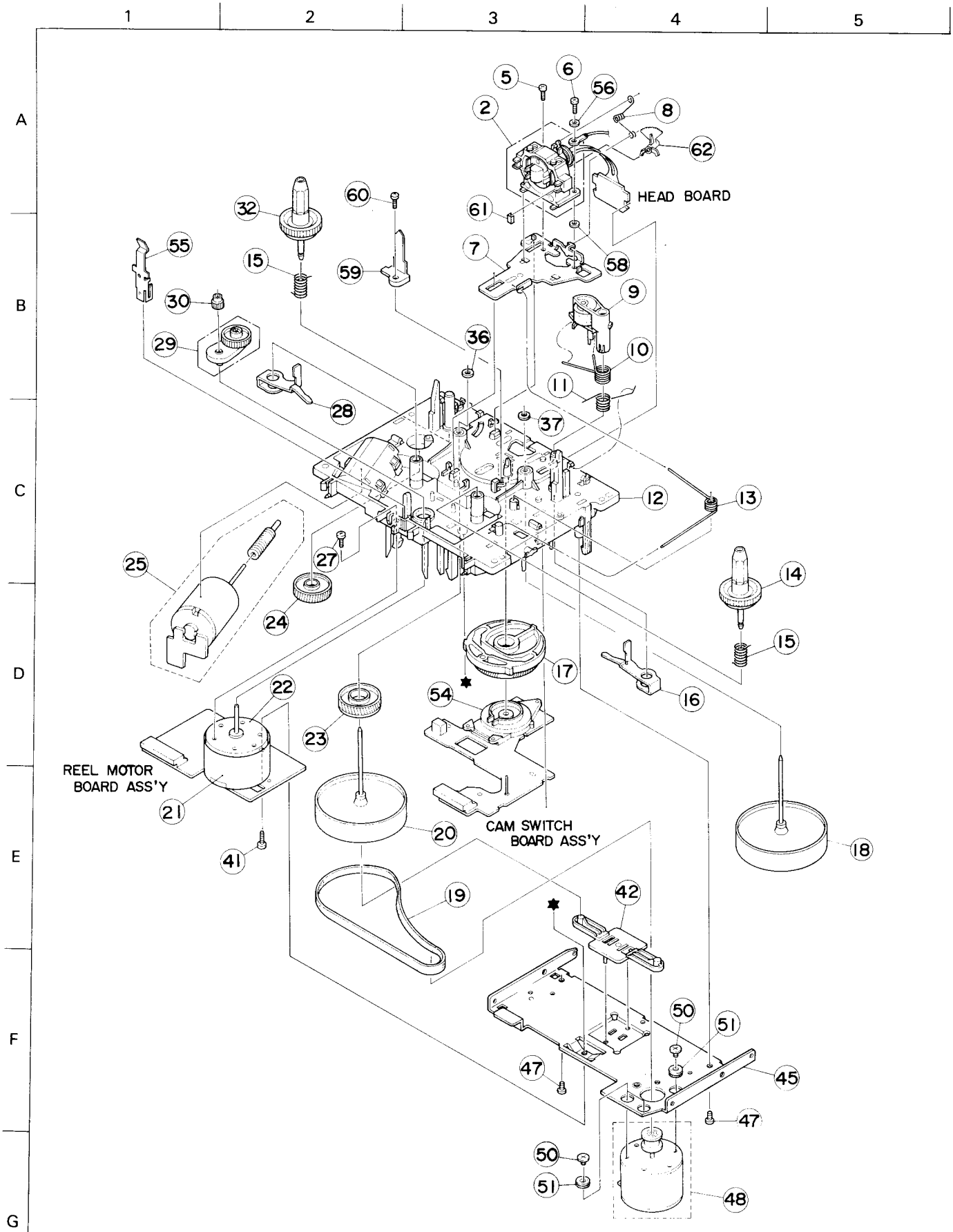


Fig. 9-1

● **Mechanism Component Parts List**

BLOCK NO. M 3 M M

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	2	VKS3524-00B	HEAD MOUNT ASSY		1
	5	SDST2004Z	SCREW		1
	6	SDST2005Z	SCREW		1
	7	VKL6942-00D	PICUP UNIT ASSY		1
	8	VKW4914-007	HEAD SPRING		1
	9	VKP4221-00A	PINCH R.ASS'Y		1
	10	VKW4982-001	SPRING		1
	11	VKW4933-003	TORSION SPRING		1
	12	VKS1112-40G	CHASSIS B ASSY		1
	13	VKW4930-002	RETURN SPRING		1
	14	VKS5403-00A	T-UP REEL ASY		1
	15	VKW4928-003	B.T. SPRING		1
		VKW4928-003	B.T. SPRING		1
	16	VKL6940-002	PINCH LEVER (L)		1
	17	VKS2209-005	CONTROL CAM		1
	18	VKF3186-00B	FLYWHEEL(L)ASSY		1
	19	VKB3001-049	BELT		1
	20	VKF3184-00B	FLYWHEEL(R)ASSY		1
	21	FE-ZMS514	SHIELD CORE		1
	22	MMN-6F4RA38	D.C.MOTOR		1
	23	VKS5331-002	ACT. GEAR (6)		1
	24	VKS5330-004	ACT. GEAR (5)		1
	25	MXN13FB12F-SA4	DC MOTOR ASS'Y		1
	27	SDSP2605Z	SCREW		1
	28	VKL6939-002	PINCH LEVER (R)		1
	29	VKS5325-00F	FR ARM ASY		1
	30	VKS5328-002	GEAR		1
	32	VKS5403-00A	T-UP REEL ASY		1
	33	VKP4219-00A	PINCH R.ASS'Y		1
	34	VKW4981-001	SPRING		1
	35	VKW4932-003	TORSION SPRING		1
	36	VKZ4035-009	WASHER		1
	37	Q03093-527	WASHER		1
	41	SDSF2608Z	SCREW		1
	42	VKS5327-003	THRUST PLATE		1
	45	VKM3507-001	FM BKT		1
	47	SDSF2605Z	SCREW		2
	48	MMI6H2LWK-SA5	MOTOR ASS'Y		1
	50	18511418T	COLLAR SCREW		3
	51	18211266T	MOTOR RUBBER		3
	56	WNS2000N	WASHER		1
	58	WFM266013	WASHER		1
	59	SPI-328-02	REFLECTOR		1
	60	SBSB2606Z	SCREW		1
	61	VKY4547-001	MIRROR		1
	62	VKS3485-002	HEAD GEAR (1)		1

10 Packing

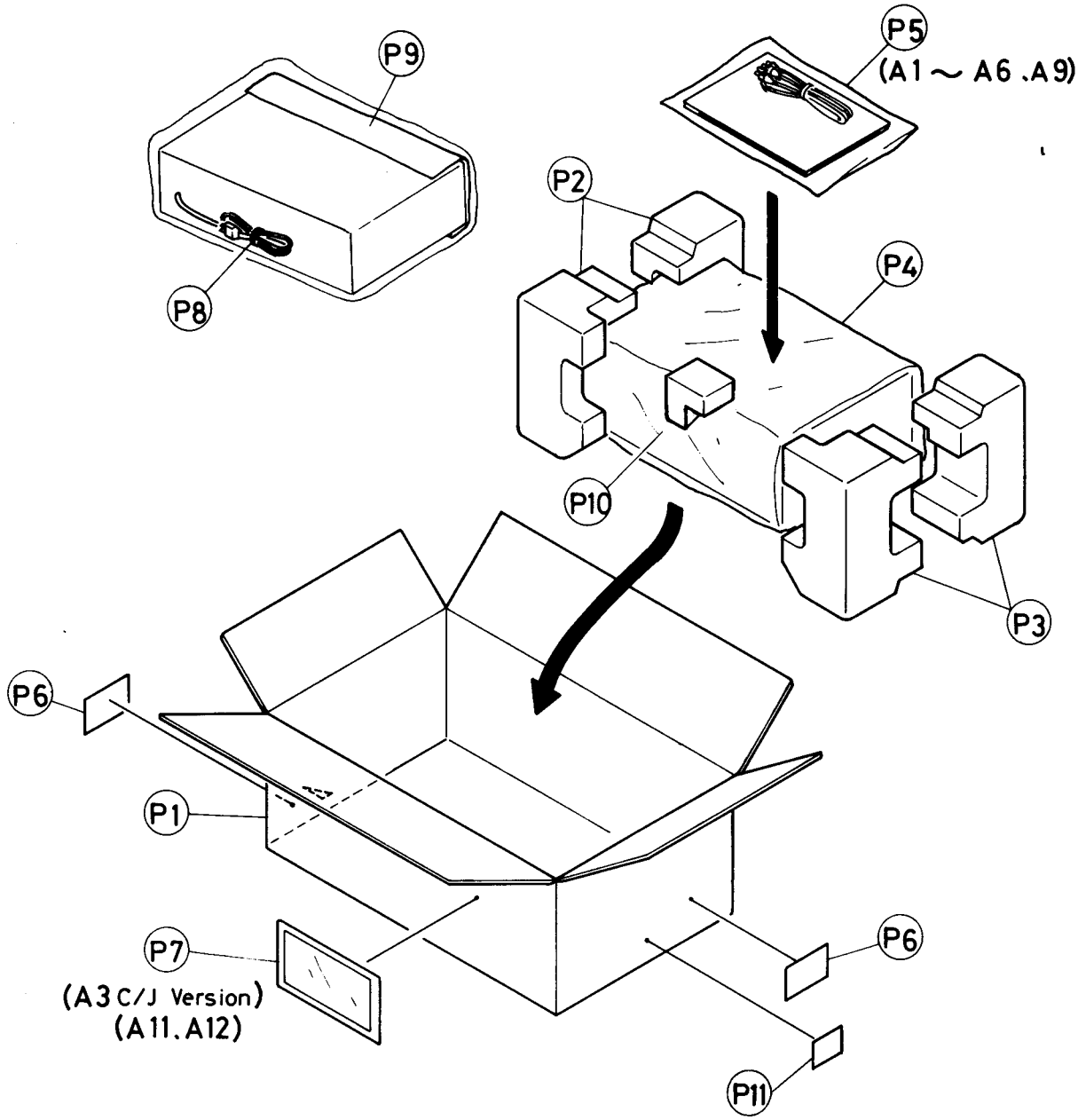


Fig. 10-1

● Packing Parts List

BLOCK NO. M 4 M M

⚠	REF.	PARTS NO.	PARTS NAME	REMARKS	QTY
	A 1	VMP0039-00D	PIN CORD		1
	A 2	VNN2289-661	INSTRUCTIOS		1
	A 3	BT-20025K	WARRANTY CARD	C VERSION	1
		BT-20044G	SAFETY GUIDE	J VERSION	1
		BT-20047E	WARRANTY CARD	J/U(EES&PX) VERSI	1
		BT-20060	WARRANTY CARD	B VERSION	1
		BT-20066A	WARRANTY CARD	B VERSION	1
		BT-20117	WARRANTY CARD	G VERSION	1
		BT-20122	WARRANTY CARD	A VERSION	1
		BT-20122-1	WARRANTY CARD	A VERSION	1
	A 4	EWP805-001E	REMOTE WIRE		1
	A 5	E43486-340A	SAFETY I.SHEET	B VERSION	1
	A 6	TCN-3379	TAPE PAMPHLET	B/E/G VERSION	1
		TCP-3428	TAPE PAMPHLET	A/U VERSION	1
		TCU-3492	TAPE PAMPHLET	C/J VERSION	1
	A 9	BT-20071A	JVC CENTER LIST	C VERSION	1
		BT-20108A	SERVICE NETWERK	J/U(PX) VERSION	1
	A 11	VNC5311-203	CAUTION CARD	U(EES&PX)	1
	A 12	VNC5311-204	CAUTION CARD	U(EES)	1
	P 1	VPC2289-002	CARTON		1
	P 2	VPH2422-001	CUSHION (L)		1
	P 3	VPH2423-001	CUSHION (R)		1
	P 4	E300196-031B	ENVELOPE		1
	P 5	VPE3005-007	POLY BAG	FOR INSTRUCTION	1
	P 6	VND3044-001	SIRIAL TICKET	A/U VERSION	1
		VND3044-002	SERIAL TICKET	J VERSION	2
		VND3044-003	SERIAL TICKET	E VERSION	1
		VND3044-004	SIRIAL TICKET	BVERSION	1
		VND3044-005	SIRIAL TICKET	G VERSION	1
		VND3044-006	SERIAL TICKET	C VERSION	2
	P 7	E66416-003	ENVELOPE	J/U(EES&PX) VERSI	1
	P 8	Q04141H	WIRE CLAMP		1
	P 9	VPK3001-012	SHEET		1
	P 10	OPH3224-002	CUSHION		1
	P 11	VND3065-022	UPC CODE LABEL	C VERSION	1
		VND3065-023	UPC CODE LABEL	J VERSION	1
		VND3069-017	EAN CODE LABEL	A/B/E/G/U VERSION	1